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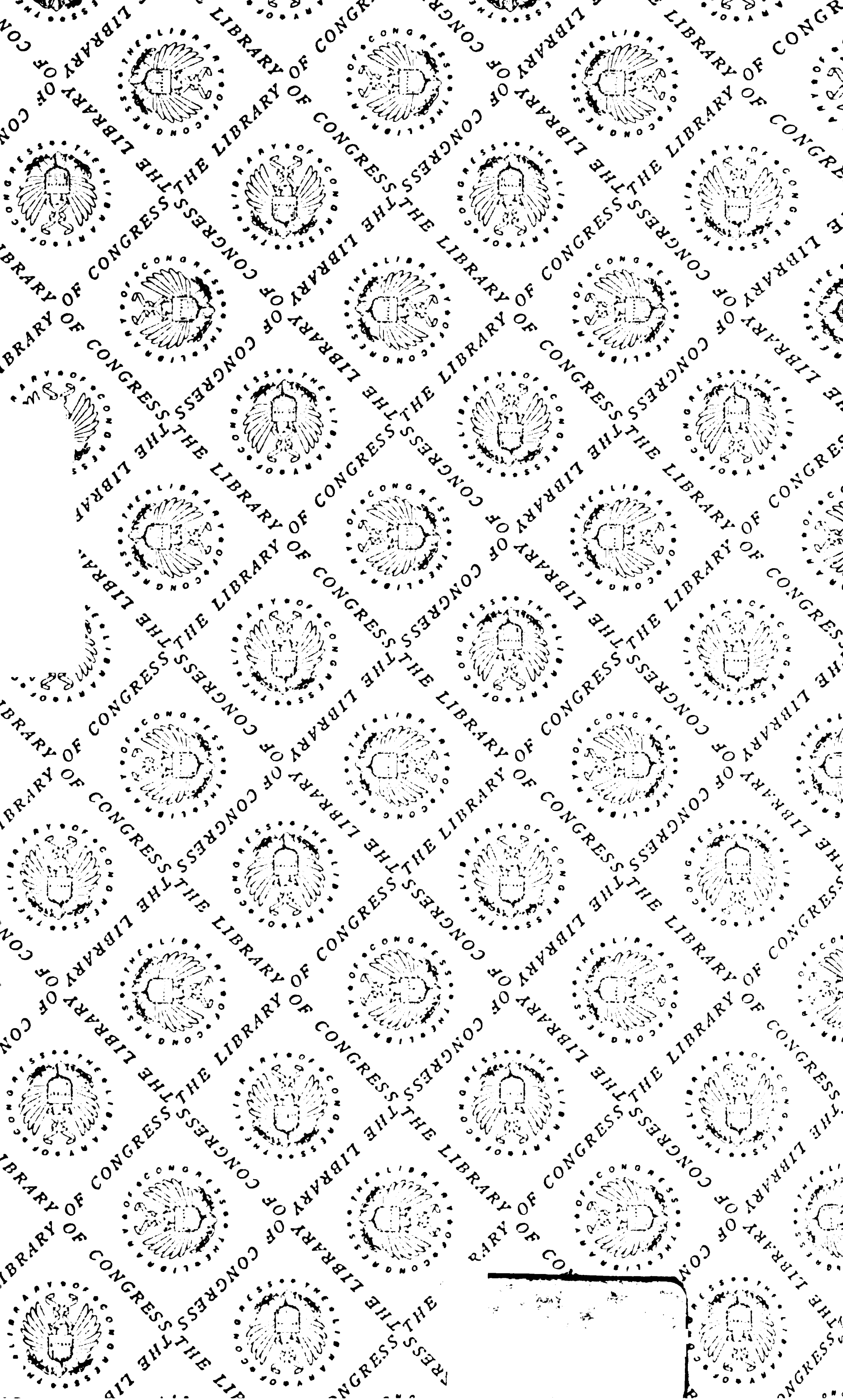
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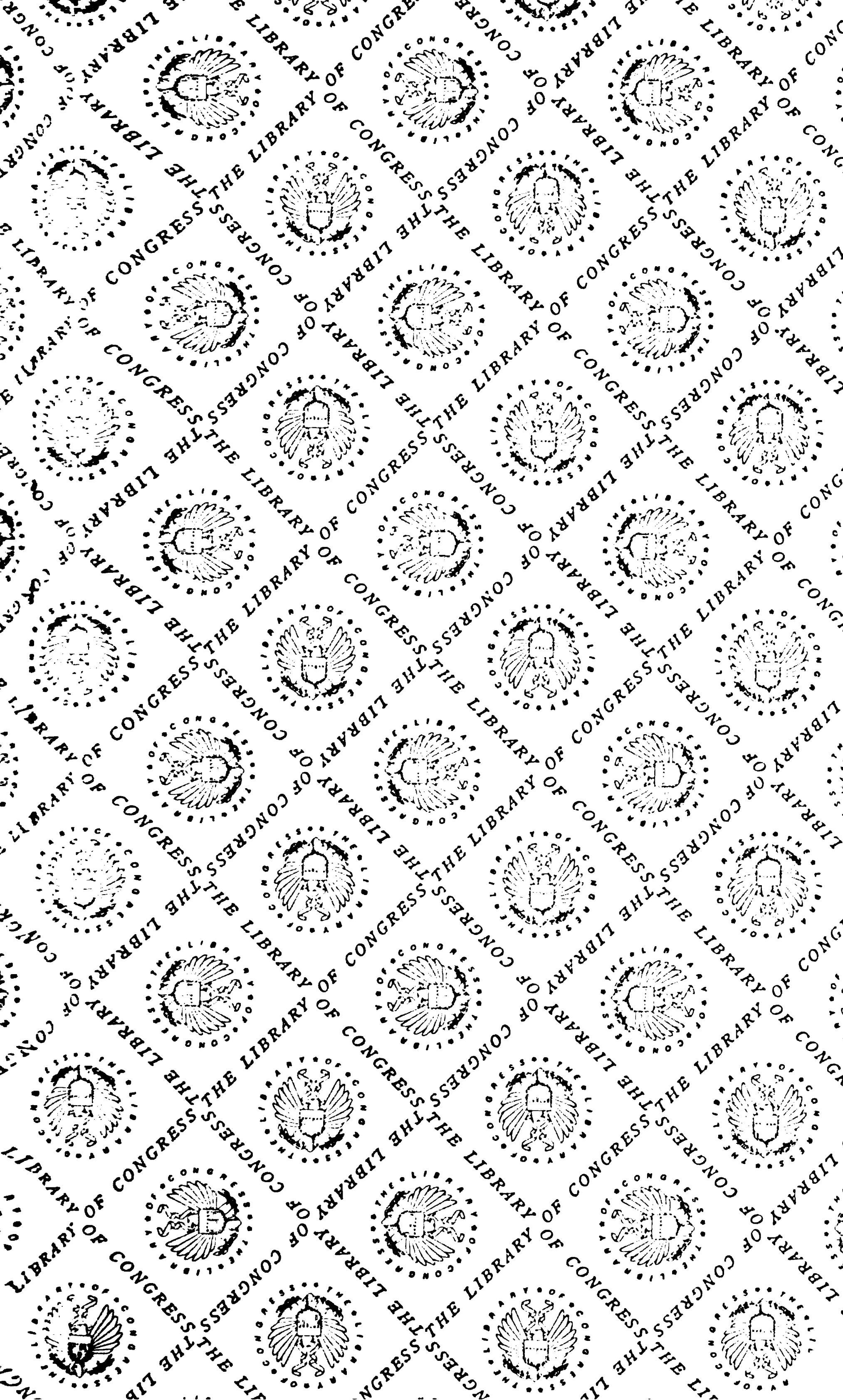
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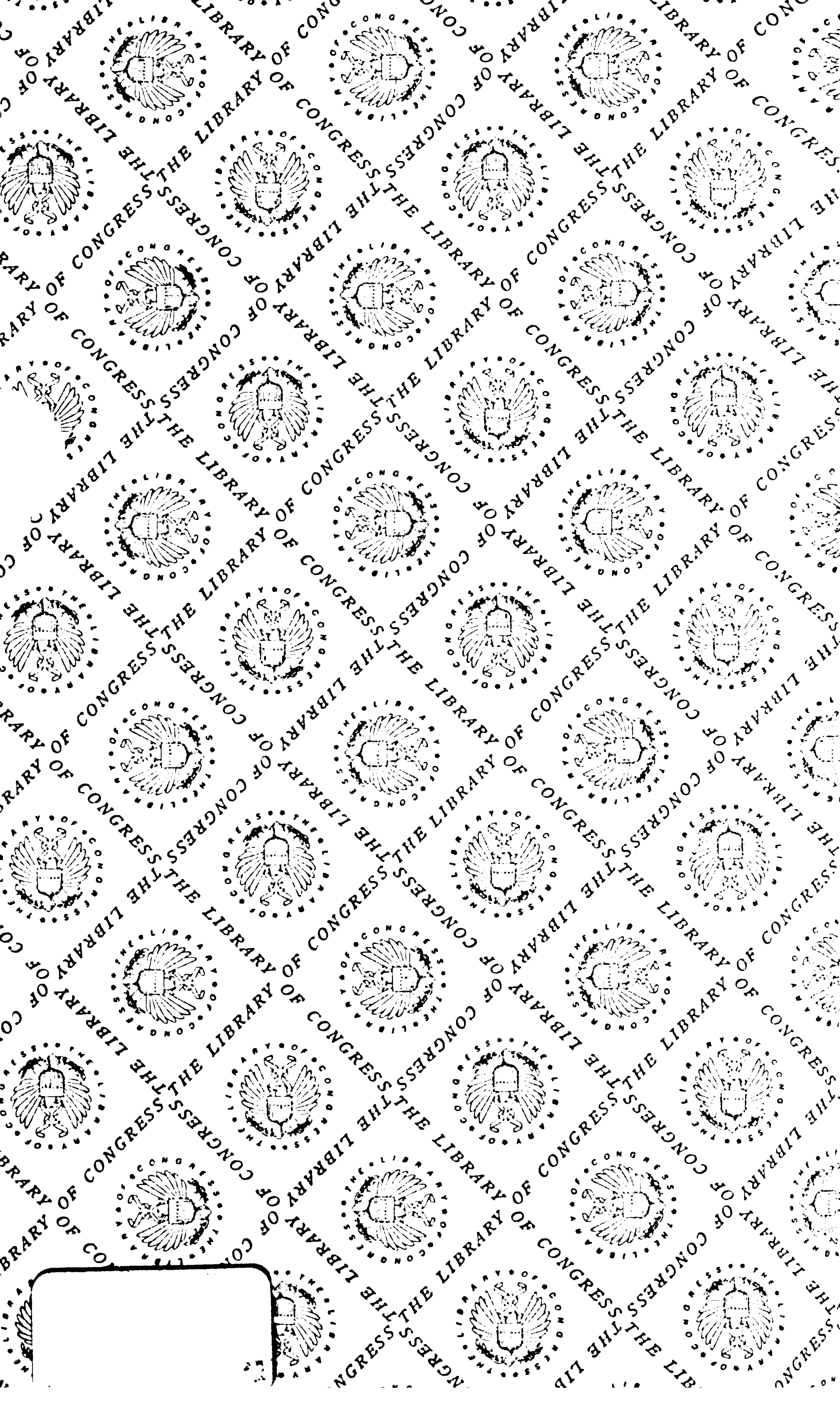
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ARMY APPROPRIATION BILL, 1919

HEARINGS

BEFORE THE

U. S. Congress, House,

COMMITTEE ON MILITARY AFFAIRS.

HOUSE OF REPRESENTATIVES

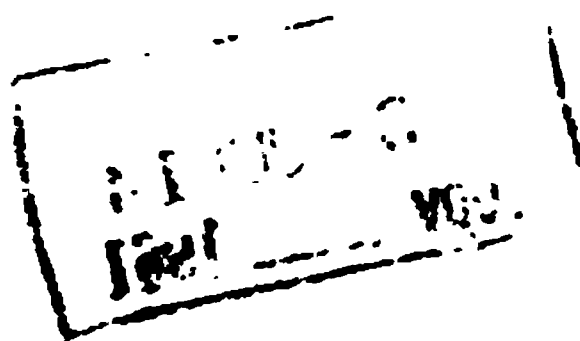
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SECOND SESSION

DECEMBER 7, 1917, TO FEBRUARY 8, 1918



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On Signal Corps.—Mr. Gordon, Mr. Dent, Mr. McKenzie.

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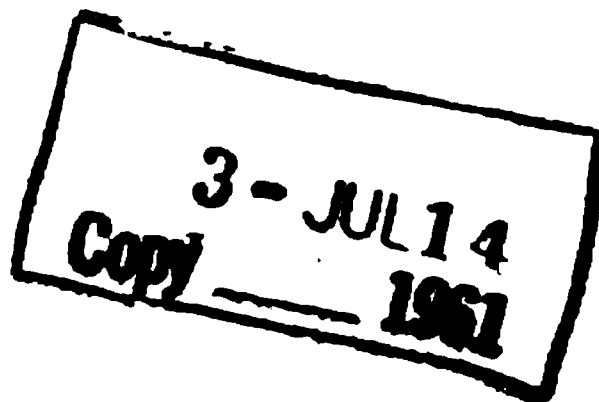


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ARMY APPROPRIATION BILL, 1919.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON MILITARY AFFAIRS,
Friday, December 7, 1917.

The committee met at 10.30 o'clock a. m., Hon. S. Hubert Dent, jr. (chairman), presiding.

STATEMENT OF MAJ. GEN. WILLIAM CROZIER, CHIEF OF ORDNANCE.

The CHAIRMAN. General, we understand, of course, that you were not given very much notice to prepare for these hearings, and we will just start to-day and go through the different items in the committee print of the bill under your department, and then you can suggest to us whether you are the proper party to explain those items or who ought to explain them.

The first item is on page 14, for pay of 20,000 enlisted men, Ordnance Department, \$7,873,800.

Gen. CROZIER. Mr. Chairman, I suppose the appropriate thing for me to say about that would be to inform the committee why we need 20,000 men and what we are going to use them for. The number of enlisted men in the Ordnance Department has not in normal times reached one-tenth of this aggregate, and while, of course, an expansion of tenfold is moderate in comparison with the rate of expansion of the Army at large, at the same time the particular reason for it deserves some explanation. We use enlisted men of the Ordnance Department for guarding and policing the arsenals and for taking charge of and handling, as clerks and foremen and laborers, the stores which are kept at the depots which are established at each one of the cantonments where divisions are now training. You understand, the things that the Ordnance Department supplies have to be kept in depots at each place where there is a considerable aggregation of troops, and they need some people to look after them, to arrange them on shelves, load and unload them, and issue them to the troops. So there are required about 150 men for each one of these divisions where they have some 30,000 or 40,000 troops in a camp. In addition to that, we need men for the same purpose in France with the troops over there, and we need also to establish in France depots of supply and repair, which constitute in reality large arsenals of issue and repair, like Rock Island Arsenal in this country, or Watervliet Arsenal, or Springfield Armory, or any one of the large arsenals, except that the ones we will establish in France will not be manufacturing arsenals. They will be arsenals of storage, issue, and repair.

Mr. TILSON. You have there assembly depots also, where you load artillery ammunition, and so on?

Gen. CROZIER. Yes; part of the artillery ammunition is sent over not completely assembled for certain reasons, depending on the character of it, and it is put together there. Another part of the ammunition that we use has a certain salvage. The brass cartridge cases are expensive and they are saved and reloaded, and that means there must be a place over there to do this reloading; that is, the brass cartridge cases of artillery ammunition. The gun carriages have to be repaired, rifles have to be repaired, cartridge belts have to be repaired, pack carriers have to be repaired, and there is an enormous amount of salvage, and the repair process also includes the cannon themselves, which have to be relined and the breech mechanism repaired, and so on. The arsenal over there will probably require for the operation of it, taking wide limits, from 7,000 to 15,000 men. We hope to have all of the personnel that does this work in the theater of war, either commissioned or enlisted and not to use civilian employees.

In the United States, of course, the great bulk of our operatives at the arsenals are civilians, employed under the civil-service rules, but in the theater of war that is not a good status for them to have, and we propose to have all that class of people either enlisted or commissioned, unless it may be possible on the spot to hire some labor of the lowest class. That may be possible or it may not. France is pretty well drained of labor, and unless people can be brought there from the less advanced countries there will be very little to be had I am afraid. The British, I believe, have imported Chinese with some success and are using them. It may be necessary to import negroes or some people of that sort, but that is the only prospect of employing any labor except that which we think ought to be either commissioned or enlisted.

The CHAIRMAN. Have you 20,000 men now?

Gen. CROZIER. No, sir.

The CHAIRMAN. How many enlisted men have you in your department?

Gen. CROZIER. We may have 5,000, possibly, at the present time. We are doing our best to recruit them. We are running against a good many difficulties. A large number of our men ought to be mechanics. They should be machinists or carpenters or men of allied trades, and of such men many have families, and they would have to make very considerable sacrifice to come to us at the pay which we can give them as enlisted men. That is one trouble. Another trouble is that a good many of these men are already drafted, and when we want to get them transferred, men who would be the best ones for us—that is, men who would be of the foreman and superintendent class—usually have such qualities that they have already been made sergeants or first sergeants in their organizations, and their regimental and company commanders naturally do not want to let them go.

Mr. OLNEY. You can take men of the draft age, can you?

Gen. CROZIER. Yes; we can take men of the draft age if they will enlist.

Mr. CALDWELL. General, did not the old Army acts which we passed specify how many men should be in the Ordnance Department?

Gen. CROZIER. No; they authorized the President to form organizations of special and technical troops, and under that authority the President can fix the number, and he has thus far fixed 20,000.

Mr. KAHN. The law itself authorized the President to fix the number.

Mr. CALDWELL. And he has actually issued an order fixing 20,000 as the maximum for the Ordnance Department?

Gen. CROZIER. Yes, sir.

Mr. CALDWELL. Have you opened any recruiting stations especially for the Ordnance Department or are you taking voluntary enlistments through the regular enlisting officers?

Gen. CROZIER. We are doing both. We have opened some special recruiting stations and we have asked for the assistance of engineering societies and organizations in various cities to help recruit men for this special work, and they have in some instances given very helpful assistance. We have undertaken a campaign of the usual kind which sets forth in manner which we hope will appeal to men what the need is and how certain classes of men can render the best kind of service. We try in this not to give anybody any gold bricks and yet tell a story which will be a true story and at the same time have the inspiration in it which the subject really has or really ought to have.

Mr. KAHN. General, these 20,000 men are predicated upon an Army of what size?

Gen. CROZIER. About one million and a half.

Mr. KAHN. Do you not think we will have to have 3,000,000 men before another year is over?

Gen. CROZIER. I think so; yes, sir.

Mr. KAHN. Therefore, do you not think there will be a deficiency in this item?

Gen. CROZIER. I think so; yes, sir.

Mr. KAHN. Do you think we probably would be justified in providing for 40,000 enlisted men in your service?

Mr. QUIN. The ratio would not increase with the increase in the number of men.

Gen. CROZIER. It does not increase as fast as the troops they have to provide for increases, Mr. Kahn.

Mr. KAHN. What would be your estimate of the actual number of men you would require in your service before the end of the fiscal year 1919?

Gen. CROZIER. If we could get as many troops in France as we would like to get there, I should say it would certainly not be less than 30,000 men; but in view of the limitations, which you all know about, we can not at the present time say whether it will be possible to get any such number of men there, and that is why I am not asking for any more than I now can see we really need, and I am relying upon the fact that if the situation in that respect improves you will be in session here for some time and I can come to you again.

Mr. KAHN. But I have in mind, too, that it would then come as a deficiency and would go to another committee, and I prefer to have this committee handle it if I can.

Gen. CROZIER. I think it altogether possible I will have to ask for a 50 per cent increase in this number of men.

Mr. TILSON. You have there assembly depots also, where you load artillery ammunition, and so on?

Gen. CROZIER. Yes; part of the artillery ammunition is sent over not completely assembled for certain reasons, depending on the character of it, and it is put together there. Another part of the ammunition that we use has a certain salvage. The brass cartridge cases are expensive and they are saved and reloaded, and that means there must be a place over there to do this reloading; that is, the brass cartridge cases of artillery ammunition. The gun carriages have to be repaired, rifles have to be repaired, cartridge belts have to be repaired, pack carriers have to be repaired, and there is an enormous amount of salvage, and the repair process also includes the cannon themselves, which have to be relined and the breech mechanism repaired, and so on. The arsenal over there will probably require for the operation of it, taking wide limits, from 7,000 to 15,000 men. We hope to have all of the personnel that does this work in the theater of war, either commissioned or enlisted and not to use civilian employees.

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Gen. CROZIER. I think it altogether possible I will have to ask for a 50 per cent increase in this number of men.

Mr. GORDON. That would depend upon an improvement of transportation service in a marked degree, if I understand?

Gen. CROZIER. Yes, Mr. Gordon.

Mr. KAHN. But do you not think that even if we did not get the number of men to France that you would like to see go over there, yet we will have a material increase in the number of men who will be training in this country and they will require ordnance supplies of some kind or other which you will have to prepare for, and do you not think you will require a considerable increase of men for that additional increment of the Army?

Gen. CROZIER. Of course, I can only surmise as to that, Mr. Kahn. I do not speak with authority, but I should say that if we did not have a prospect of getting our men over there we would not call them into the service unnecessarily, on account of the expense. Now, another thing is that the big requirement for this class of men is for manning these salvage establishments—that is a good name for them—and storage depots in France. Here the number required even for a considerable increase of the troops is not so great. It is not numbered in thousands. As I say, for instance, about 150 to a division are nearly all we need.

Mr. KAHN. Does this number of men take into consideration the second increment of the National Army of 500,000 men?

Gen. CROZIER. No, sir; it does not.

Mr. KAHN. We see in the papers that they will be called for probably in the early part of next year, which would be even before the beginning of the fiscal year 1919.

Gen. CROZIER. Yes, sir.

Mr. KAHN. If the War Department carries out its program of calling those men and putting them into the camps in this country to be trained, do you think that these 20,000 men will be enough to serve that additional increment?

Gen. CROZIER. If we are able to send over to the other side as many as we would like to, or as many as we think now we may, it will not be enough, Mr. Kahn, and for that purpose I should say it should be increased about 5,000.

Mr. GORDON. Gen. Crozier, may I ask you a question at this point? You stated a moment ago the total number of men in the Army you had in mind in estimating for your department?

Gen. CROZIER. Yes; one million and a half, Mr. Gordon. That is a little more than we have now.

Mr. GORDON. How many have we now?

Gen. CROZIER. About 1,300,000.

Mr. GORDON. Does that include the drafted men in the camps?

Gen. CROZIER. Yes.

Mr. TILSON. General, I would like to ask if you have considered the matter of sending back to our manufacturing plants men who are already enlisted in the Army, under some sort of arrangement with the manufacturer, and letting them work there as enlisted men?

Gen. CROZIER. Yes, Mr. Tilson. That question has been up in several forms. It is a very important question.

Mr. TILSON. You know it to be a fact that there are hundreds and thousands of men who ought to have remained in the manufacturing plants who, as a matter of patriotism or because they thought they

would be called slackers or something of that kind, have already left more important work or have refused to claim exemption in the draft, and have gone into the service and are now serving as infantrymen or something else, when they could be rendering infinitely better service to the country if they were back in those manufacturing plants, and they would be glad to go back there and work if they could at the same time be soldiers; if they could wear their uniform and be soldiers, they would be perfectly willing to work anywhere. Have you considered that question at all?

Gen. CROZIER. Yes, sir. We are confronted now with an accentuated reminder of it. Regulations which are about to issue restrict the voluntary enlistments to those which can be made before the 15th of this month, and the consequence is that a large number of just the class of men you mention are declaring now that if they can not be in some way or other enlisted for the service they are in, they will leave that service and go and enlist at the recruiting depots for any service for which they can make any kind of choice. I have that in my own office. I have dozens of clerks here in Washington in my office who are saying that if they can not be enlisted now and used where they are, they will go and enlist for some other kind of service. The question resolves itself into something like this: You have passed a law removing the restrictions on the detachment or detail of enlisted men during the war, and that would seem to give authority to detach an enlisted man for service in a munitions factory or for work in the arsenals. As far as work in the arsenals is concerned. I do not think there is any doubt about the authority under that special law, because that is the way most of our workmen used to be gotten and it has been only by custom that we have passed into the other method of employing them in a civil capacity.

Taking the other point, however—that is to say, the employment of enlisted men in private munitions plants doing work for the Government—the proposition becomes more important, because they are doing more work than is being done in the arsenals. If we do this, if we detach enlisted men for work in these plants and enlist more men to take their places, as we could under the law, you have a situation in which there are men working for soldiers' pay alongside of other men who are working for the wages of the vicinity, and they are very different. You also have the situation in which you have a large number of working people—because it would not amount to anything unless you do something on a large scale—who are not free men, and therefore not in a position to take part in the deliberations of labor unions or in the matters connected with labor unions, and you raise a question right off with the labor unions. Now, you might, perhaps, try to meet that by saying, "Very well; we will enlist these men and we will detach them for service in the munitions factories, but we will suspend their pay as members of the military service during that time and allow them to receive their pay from the manufacturers on the same terms as everybody else." Now, there is no authority of law for doing that, because we can not furlough a man without pay.

Mr. TILSON. You think that would be the better way to come at it; that is, the practical way to get at it?

Gen. CROZIER. I think that if this war goes on, as it seems likely to, that something of that kind has got to be done; we have got to

authorize something like this: That men shall be in such a status that they may work in munitions factories as civilians work there, but subject to the power, if they do not continue to work there, to take them back into the military service.

Mr. ANTHONY. After December 15 all voluntary enlistments will be closed in the Army, will they not?

Gen. CROZIER. Yes, sir.

Mr. ANTHONY. Under the selective draft law you have the power to say which men you will accept and which you will exempt; therefore why not, under the draft law, simply exempt those men as long as they work in your munitions plants?

Gen. CROZIER. That can be done.

Mr. ANTHONY. And why the necessity for new legislation?

Gen. CROZIER. They do not want to be exempted, and they will not accept it.

Mr. ANTHONY. You say you want them to stay in the factories, so why not exempt them and let them stay there?

Gen. CROZIER. Oftentimes they will refuse to accept that exemption, and they go and enlist voluntarily.

Mr. ANTHONY. It is up to the Government to exercise that discretion.

Mr. FIELDS. Suppose a man who is a carpenter or a draftsman is taken in the draft; on his own request would he be transferred for duty in the Ordnance Department? Would he have any choice or would you have any choice as to where he would be placed?

Gen. CROZIER. That would be a proper procedure under the law, and there is plenty of law to do it. I can now call upon The Adjutant General for a certain number of carpenters or a certain number of machinists, but, in accordance with the ruling that the War Department has made—of course, all of these rulings are new and have to be tried out—I can not ask for the detachment of men to the Ordnance Department by name. As an illustration, for the purpose of manning this arsenal of storage issue and repair which we must construct in France, I have secured from a number of manufacturing establishments the names of individuals, probably running up to 1,200 or 1,400, who would be very suitable men for that kind of a service, but I am not authorized to ask for them by name.

The reason for that is this, as I said a moment ago, that these men are leading men, men of such a character that they would be good foremen or good leaders of any kind, and that kind of a man, when he gets into the military service is immediately spotted and made a noncommissioned officer, and if I ask for such a man by name I run against this, that the military commander will say, "That man is my first sergeant," or "That man is an important noncommissioned officer in my company," and they naturally do not like it. So that there will have to be a certain weighing of the insistence of a demand. Here is a man who is of a character that will make him a leader or a good noncommissioned officer; in addition to that, he is a trained machinist, we will say. Now, where should he go? The military service will say, "We have got to have men of that character, otherwise our Army will be a mob." The technical service says, "We have got to have men of that character to follow their trades in France or else the work can not be done."

Mr. FIELDS. Would the request of a man be given any consideration as to where he shall be placed?

Gen. CROZIER. Well, theoretically, every such man should go where the best judgment you can bring to bear on his case says he ought to go, but, as a matter of fact, I never knew of an instance where a man's personal wishes or statement as to what he thought he could best do were not taken into consideration by the people who are nearest to him.

Mr. KAHN. Now, right along that line. Have not England and the other countries met these same difficulties?

Gen. CROZIER. Yes, sir.

Mr. KAHN. Do we know how they have met them?

Gen. CROZIER. We know to a certain extent.

Mr. KAHN. Can we not follow their plan in this country?

Gen. CROZIER. In general we can, Mr. Kahn, but there is some difficulty in doing it, because there is a little conflict of evidence. Illustrating by continuing my answer to Mr. Tilson's question as well as trying to answer your own, they met this difficulty in the beginning—of having workmen actually work in the munitions plants—by enacting that no such workman should be engaged in a strike, in the first place, and also that no such workman should leave such a plant as that and take employment in another plant without a leaving certificate—that is to say, the management of the plant he was leaving must grant him permission. And it was made an offense for the management of any other plant to employ a man coming to them without a leaving certificate.

Mr. KAHN. That seems to be good legislation.

Gen. CROZIER. That, in the earlier days of the war, had nothing but good words said about it, but recently they have made some modifications, because they have said they have some trouble with that leaving certificate; but the latest and best information I get from people who are closest to it is that it is not necessary now, that they can meet the matter in other ways. They think, however, that it served its purpose, and served a practical industrial service in the early months of the war. Now, here is something they do: They have in the principal munitions plants, private and public, a representative of the ministry of munitions, who looks out for the industrial side of the work. Their interest is to have every good man in the munitions plants; and they have a representative in the war office who wants every good man they can get in the ranks at the front. Each man's case in the munitions plants is considered by those two men, and they make up their minds as to whether a man had better remain in a munitions plant or whether he had better go into the ranks. Now, if a man is employed in what they call a nonessential industry, there is not any such board that sits on it; and if he comes within the terms of the draft he goes, and there is no question about it. Men knowing that drift into these munitions plants—it produces a natural current and drift into the munitions plants—and that has had the effect of keeping the munitions plants supplied very well.

Mr. KAHN. Will you let me ask a question in connection with that right now? I have seen statements in the papers and magazines to the effect that in many cases women have taken the places of men in the munitions plants and that women are now doing the work that

was formerly done by men, so as to enable the men to go to the front. Do you know to what extent that is being done in the foreign munitions plants?

Gen. CROZIER. To a very large extent, Mr. Kahn, and to an extent that would have been considered nothing less than remarkable before the war.

Mr. GORDON. That is in foreign countries but not in this country?

Gen. CROZIER. No; not in this country.

Mr. TILSON. But it is being done in this country?

Gen. CROZIER. Yes; to some extent.

Mr. KAHN. I was going to follow my former question with this question: If this war is a protracted war—and I agree with you fully in believing that it is not going to finish next year, in fact, I will go further and say I do not think it is going to be finished before two or three years—will we not have to come to that in this country?

Gen. CROZIER. We undoubtedly will if we can get our troops over to the other side as we intend to get them over there.

Mr. KAHN. Then women will be doing the work that these men you speak of now are doing in many instances?

Gen. CROZIER. I think it is not far from the mark to say that in England they have taken into the military service 40 per cent of the men. Now, I do not mean 40 per cent of the men of military age but 40 per cent of their men have been taken into the military service. Now, you can see at once what a tremendous vacancy that will leave to be supplied with some other kind of labor.

Mr. TILSON. Could you not at the present time utilize men a little older than the military age, men thoroughly qualified for the work, either of an officer or of an enlisted man—utilize men of older age than strictly military age, and as soon as you get them be able to send a lot of these husky officers of military age abroad—that is, all except certain specialists, whose places could not be taken in this country?

Gen. CROZIER. That is undoubtedly what we will come to and what we will work toward; but in the beginning it is not a good reliance, because, in the first place, it is not necessary. We have not taken more than 5 per cent of our men so far; and, in the next place, it requires an alteration of method and an alteration of the point of view of the people as to what work is suitable for certain persons, which can not be brought about quickly, and if we are going to have this absolutely necessary industrial work of preparation go on at all we must do it with a class of people whom we will recognize as such and as people who can more appropriately be employed in this most necessary work.

Mr. TILSON. At the present time those men who might be called on to go abroad would probably receive better training right here than at any other place, and right in our munitions plants in connection with the manufacture of ordnance?

Gen. CROZIER. Yes; that is true.

Mr. GREENE. May I suggest this, General? Inasmuch as it appears to be the reasonable expectancy that all men who are within military age and are competent in these trades will eventually be called, would it not be better to overprepare than to make a second preparation from the start? Would it not be a good thing—through legislation,

if necessary—to be able to put your hands on the men of military age in these ordnance factories, munitions works, and all that sort of thing, and have them, even if they still remain at their machines, under military organization and discipline, and then as fast as individuals or groups of individuals were found to be necessary for the Government service to withdraw that number of individuals or groups of individuals and have this second class of labor fed in at the other end in order that it might immediately take the places of those withdrawn?

Gen. CROZIER. Yes, sir. I think you can say that if we require men to go out and endure the hardships of the extreme front, risk their lives and lose them, that it is not too much to in some way or other require that men shall work at home in factories where their services are indispensable. That is one point. Now, another point is this: I am told by officers, and others, who have been close to this subject of labor supply for munitions work in England, that, as a matter of fact, with the kind of material that war is waged with nowadays there is not in any country enough skilled men, and that if any man of trained skill in any of these industries which contribute toward the armament of the forces is employed in any way in which his trained skill is not utilized that trained skill is wasted in a way that we can not afford to waste it. Here is a husky young fellow who is just the kind of a man who would make a splendid soldier, but he is a skilled machinist. The experience of other countries, as it has been detailed to me, is to the effect that if you do not somewhere in connection with your military work, either at home making munitions or in your repair plant over on the other side behind the troops, use that man as a machinist you have wasted an amount of machinist skill which you can not afford to waste.

Mr. GREENE. That is right in line with my suggestion. Why is it not the wise, prudent, and foresighted policy to be able to put your hand on the bulk at the start, from the military point of view, and then sift them into specialized services, the making of munitions, and so on, as necessity demands, and not wait until an emergency presents itself, bringing them right now under military organization and control?

Gen. CROZIER. I think that something of the kind—if you could thrash out acceptable legislation—would be one of the most desirable things that could be done.

Mr. KAHN. Do you think it would require additional legislation or are there any laws now in force which, by making regulations, would enable the department to get control of these men?

Gen. CROZIER. If we were to do something of that sort we have had legal opinion to the effect that it would amount to the conscription of labor. Now, there is no doubt about the authority of Congress to conscript labor but it has not consciously, thus far, exercised that authority.

Mr. SHALLENBERGER. Is there not a distinction in conscripting labor for private profit or for Government work? You could not conscript them to work in private munitions plants and yet that is where we are making our ordnance principally.

Gen. CROZIER. I think Congress has power to conscript labor for work in private munitions factories where they are doing work for the Government.

Mr. SHALLENBERGER. Where a profit is being put into the pockets of the owners of the works?

Gen. CROZIER. The subject of the profit that will go to increase the fortunes of private workers would have to receive very careful consideration in connection with that subject.

Mr. SHALLENBERGER. Of course, you could commandeer those plants.

Mr. TILSON. Could it not be worked out in this way: That you could send a man to a munitions plant, give him his pay and his commutation of rations, and so on, and at the same time have the private munitions plants pay the Government the same amount that that man, if he were not a soldier, would receive?

Mr. MCKENZIE. What would the other munitions manufacturers say to whom you were not furnishing these experts?

Mr. KAHN. That is a detail, anyhow.

Mr. QUIN. Could you conscript anarchists and the persons out on the farms so that they could be compelled to make products for the soldiers to eat?

Gen. CROZIER. You see, the thing is very far-reaching. There is another question that comes in there. If you could conscript labor you could conscript the management also.

Mr. KAHN. Under the national defense act can we not do that?

Mr. TILSON. We can do that already without any question.

Gen. CROZIER. I do not think you can do it; you can do something that is allied to it; you can conscript a plant if the management of that plant declines to take an order for something which that plant ordinarily makes and can make; you can not only take possession of the plant and operate it, but you can punish the recalcitrant management by fine and imprisonment; but I do not think you could conscript a manufacturing organization and require them to erect another plant in which to work. Now, then, if you pass an act which would in effect be something like the conscription of labor, I should say that it would very likely cover this last point. If you could conscript a man to work a lathe, I do not see why you could not conscript a man to design a great factory.

Mr. GARRETT. I want to ask you this question: Under our selective-draft system I understand the underlying principle to be that men shall be called according to their liability for service. Now, if a man, because of the fact that he knows how to make a gun, should be exempted and goes on and earns the same wages that he did before, what sacrifice is that soldier making in the war?

Gen. CROZIER. Under those circumstances I should say that he is making no sacrifice.

Mr. GREENE. Right in line with this suggestion of the employment of United States soldiers in private shops making supplies for the Government at a profit, I do not understand that the Government is interested in any subsidiary or incidental return from the operation, but that what it is looking for are the munitions. We know that the Government may on occasions employ soldiers not at all associated with the munitions work to go there and stand guard over them and protect the manufacturer in his work and permit him to make profits by preventing assaults on his buildings or preventing the burning of them. Soldiers would be employed in that respect to help these munitions manufacturers in making their profit, but

it would be regarded as the right thing to do because of the greater benefit to the country.

Gen. CROZIER. I think you all understand as well as I do, and better, probably, a great many of you, that in England the question of profit to the private manufacturers has been met by placing a limit on the profit they can make, not a proportionate taxation of it back, but the fixing of a point which they can not pass; that is to say, they are allowed to make 20 per cent more than in normal peace times and no more; everything in excess of that goes back to the State, and the standard as to the normal peace-time profit has been the average of the two years preceding the war.

Mr. McKENZIE. Let me just ask one question right here: Is it not a fact that the correct theory of the selective-draft law is that exemption under that law is not a personal right that belongs to the citizen but that it is a means whereby the Government may say to a man, "You will serve in the Army or you will not serve." If a man is working in a munitions plant, is of military age, is conscripted, and he does not claim exemption, it is not for him to say whether he will claim exemption or will not claim exemption; it is the duty of the Government to say to him, "We will not exempt you or we will exempt you," under a statement of facts as to what he is doing and what he can do.

Now, would it not be infinitely better to follow out that line rather than to enlist a man, put a uniform on him and detail him in a private munitions plant for the manufacture of munitions, even though the munitions might be for the Government? If that were done it would at once involve us in a controversy with the labor unions, disturb the whole industrial life of the country, and bring criticism upon us that it would be very difficult to explain. Is it not your judgment that the better way is for the Government to arbitrarily exercise the power which we have given the Government under the selective-draft law?

Gen. CROZIER. I think that if it should be exercised in that way and could be exercised in such a way that would insure that the man thus exempted would continue at the work which he is exempted for it would go far to solve the problem.

Mr. McKENZIE. His exemption is always conditional and his exemption would only continue during the period of time that he continued in that line of business, and the moment he ceased to do that he could be certified for service.

Mr. TILSON. There is one further difficulty there. Suppose that procedure were followed in localities where the people were largely munitions workers and you voluntarily or involuntarily exempted everybody doing munitions work; then the quota must be made up of somebody else, and there would not be enough other people to make up the quota. In other words, you have practically forced all men who are making munitions to continue making munitions and have not left enough to make up the quota of soldiers.

Mr. McKENZIE. But that is problematical.

Mr. TILSON. No; that is an actual fact; it is an actual condition in some places.

The CHAIRMAN. You have been enlisting men in your department between the ages of 30 and 40 up to date, have you not?

Gen. CROZIER. Yes.

The CHAIRMAN. There is no reason why you should not enlist men up to 40 under the voluntary enlistment law?

Gen. CROZIER. No; if we can get them.

The CHAIRMAN. Then, under this regulation, which goes into effect on the 15th of December, you will be deprived of all voluntary enlistments—I mean between the ages of 30 and 40?

Gen. CROZIER. Yes—no; between 21 and 31.

The CHAIRMAN. No; I think you misunderstood my question, General. You are now entitled to have men voluntarily enlist in your department between the ages of 31 and 40, because that is the age limit of voluntary enlistment. I mean that 40 years is the maximum limit.

Mr. TILSON. It is from 18 to 40.

The CHAIRMAN. The point I am making is this, that under this regulation, which prevents voluntary enlistments after the 15th of December, you will be deprived of all voluntary enlistments in your department of men between the ages of 31 and 40.

Mr. TILSON. No.

The CHAIRMAN. That is what I am trying to find out. Is that what the regulations that go into effect after December 15 mean?

Gen. CROZIER. That regulation has not yet officially come to me, and I do not know what the exact language is.

Mr. MORIN. It only prevents those coming under the classification of 21 to 31.

Gen. CROZIER. That is the way I understand it.

The CHAIRMAN. I want to find out what the facts are.

Gen. CROZIER. What I understand is, although I have not had the regulations sent to me to read, that the prohibition of voluntary enlistment applies only to men who are subject to the draft.

The CHAIRMAN. If that is so, you will not be deprived of the voluntary enlistment in your department of men between the ages of 31 and 40.

Mr. GORDON. Have you a copy of that regulation?

Gen. CROZIER. No, sir.

Mr. CALDWELL. You stated in reply to a question by Mr. Kahn, in reference to the number of men that we could use, that if you could get the men over there, or as many as you thought you might need, you would need more men.

Gen. CROZIER. Yes, sir. I was not speaking of getting my men over there, but getting the troops over there that my men would take care of.

Mr. CALDWELL. What I have in mind is this: This bill will take care of a condition that will extend over a period of about 18 months from to-day. Now, we have a certain number of men over there now, and I think it is reasonable to suppose that we can carry at least 75,000 men over per month, or may be more, from now until the 18 months' period is up. Eighteen times 75,000 will be 1,350,000, that representing the number of men over on the other side. Now, if we have 1,350,000 men on the other side, we would have to have about 1,350,000 men on this side as well, would we not? Would not that be a good military situation?

Gen. CROZIER. I do not think that we contemplate permanently having on this side fully as many men as we have on the other side.

I think the more probable proportion would be 2 on the other side to 1 here.

Mr. CALDWELL. That would be after we reached from three to five million men on the other side?

Gen. CROZIER. It would be reached after we got up to a considerable number.

Mr. CALDWELL. It would not be an unfair proportion to have as many here as there——

Gen. CROZIER (interposing). It would not be far wrong now.

Mr. CALDWELL. Then, would it not be better forethought in this situation for us to provide for an Army of 3,000,000 men at this time rather than for an Army of 1,500,000 men?

Gen. CROZIER. I think that some way of providing for an Army of 3,000,000 men ought to be contemplated, and if it must be done now, rather than run the risk of its not being done at all——

The CHAIRMAN (interposing). As you know, the proposition is to provide an Army of 1,600,000 and then to provide equipment, clothing, etc., for an Army of 3,000,000. That is what the estimates call for.

Are there any other questions on this item?

Mr. GREENE. I would like to ask one question, because it is embraced in all of this discussion: So far as it is consistent with the policy of the department, General, can you state in general terms whether the always and ever-present labor-union difficulties present any serious obstacle to the practical administration of your department to-day?

Gen. CROZIER. There has been a question of wages, which have been mounting and mounting. They have mounted out of proportion to the cost of living, but thus far they have not presented any practical difficulty. So far we have been able to meet them. We had the funds and were able to meet them. That has caused us to look ahead to see what we are coming to along that line, and it calls for some thought to meet the demands and to keep down the cost of living, also. Now, there is one other line along which there has been thus far not any trouble because we have not taken radical action, but here is a possible source of trouble and necessity for trying to reach an agreement with organized labor. As I said a few minutes ago, the experience of every other country in this war has been that there are not enough skilled men, and, particularly, there are not enough machinists. Now, if there are not enough, ordinary forethought would require that we should start in as soon as we can and train some more, not only by taking men in and letting them learn their trade by being employed at it but we should try the systematic method of having machinists' schools, if it can be done, for the training of men against our future needs.

The machinists' union is very strong, and they look with a great deal of suspicion upon anything which they think will have a tendency to overstock the labor market in the matter of machinists, and they are very likely to say that, while they admit the necessity must be met in that way if the necessity arises, there is not evidence of that necessity as yet, and they also claim that they can supply all the demands for machinists in the essential industries by taking them from the nonessential industries. The only way in which that can

be intelligently discussed is by making an estimate of the need for machinists in all the essential industries, as they will be, say, six months from now, and an estimate of the supply of labor in the nonessential industries, which would be something like taking a census of the United States.

Mr. GREENE. Does that involve any conflict with the policy of this organization with regard to what is described as the conscription of labor—that is to say, the arbitrary placing of men who ordinarily in normal times would follow their own inclinations as to their places of work and putting them where military service would be required of them, although they would not necessarily be involved in any military organization?

Gen. CROZIER. The question does not touch the matter of the conscription of labor. That is to say, they raise objection to your taking the man in with his full consent—a man who wants to do it—and training him to be a machinist.

Mr. GREENE. That, of course, involves the old apprentice regulation.

Gen. CROZIER. Yes; and the placing of some limit on the number of machinists.

Mr. GREENE. Has there been the question of the substitution of the character of labor and the places of labor, the bringing of outside labor into certain localities, and that sort of thing?

Gen. CROZIER. That has not been discussed very much on this side, but I am told by those close to the subject in England that the placing of what you might call a military tag on a man and giving him a military status and then allowing him to work in munitions factories for the wages of the vicinity has not produced any labor difficulties.

Mr. CALDWELL. How many enlisted men have you in the Ordnance Department now?

Gen. CROZIER. The number is increasing every day, but I should say somewhere in the vicinity of 5,000.

Mr. CALDWELL. How soon do you think you will get up to the maximum of 20,000 authorized by the President's proclamation? It would be a guess, of course.

Gen. CROZIER. If I do not get them faster than I am getting them now, it will be a good while. I think we will get them in the course of two months or six weeks.

Mr. CALDWELL. Before the end of six months you will have the 20,000 men?

Gen. CROZIER. Yes, sir.

Mr. CALDWELL. Do you expect to get any of them by draft or all of them by voluntary enlistment?

Gen. CROZIER. I think we will probably have to get some of them by draft.

(Thereupon, at 12 o'clock noon, the committee adjourned until Monday, December 10, 1917, at 10 o'clock a. m.)

HOUSE OF REPRESENTATIVES,
COMMITTEE ON MILITARY AFFAIRS,
Monday, December 10, 1917.

The committee met at 10 o'clock a. m., Hon. S. Hubert Dent, jr. (chairman), presiding.

STATEMENTS OF BRIG. GEN. E. B. BABBITT AND COL. JAY E. HOFFER, OF THE ORDNANCE DEPARTMENT.

The CHAIRMAN. We left off last Friday on page 14, pay of enlisted men. There are one or two questions I wanted to ask before we pass that item. In handling this appropriation this year, of course, there are three bills that we have got to look to for last year's appropriation, the act of May 12, which was handled by this committee, and the acts of June 15 and of October 6, which were handled by the Committee on Appropriations. You are asking for pay of 20,000 enlisted men, \$7,873,800. The three appropriations last year gave you a total of \$7,080,000. I understood Gen. Crozier to say the other day that you had about 5,000 men. Can you tell the committee what is the average pay of the enlisted men, or how you arrive at those figures?

Gen. BABBITT. These figures, Mr. Chairman, are prepared by the Quartermaster General, and I have had, of course, nothing to do with them.

The CHAIRMAN. That explanation would have to be made by the Quartermaster General?

Gen. BABBITT. Yes.

Mr. KAHN. But he would get his estimate of the number required from you?

Gen. BABBITT. The number of men required is gotten from us, but not the pay. He has the pay as fixed by law.

Mr. CALDWELL. Have you any of that money left over?

Gen. BABBITT. Undoubtedly the Quartermaster General has. It was a question of how rapidly we could recruit this ordnance personnel. We hope to have this number of 20,000 sometime in January or February.

Mr. GREENE. General, does not the law make it possible to keep this pay item as one fund so that if there should not be personnel sufficient to take up the amount appropriated the remaining part of the appropriation may be disbursed to other arms of the service?

Gen. BABBITT. Yes, sir; it is all under pay of the Army.

Mr. GREENE. So that it would not necessarily to-day be still pertaining to this particular item?

Mr. CALDWELL. Gen. Crozier said when he was here that the Ordnance Department had been increased under proclamation of the President to 20,000 men, and that those were called under the section of the law which allowed the President to call for additional special and technical troops.

Gen. BABBITT. Yes, sir.

Mr. CALDWELL. Before that time was the personnel of the Ordnance Department considered technical troops and not carried in the general number of the line of the Army?

Gen. BABBITT. Yes, sir; and their number was never fixed by law. The number was fixed from time to time by the Secretary of War. Three years ago, for example, we had about 700 men. Between that time and last spring, when war was declared, it was increased to about 1,300 men to meet increased requirements, because we were getting larger appropriations and handling a larger quantity of supplies.

Mr. CALDWELL. The proclamation of the President increasing the Ordnance Department to 20,000 was in writing, was it not?

Gen. BABBITT. Yes; it was upon a recommendation from this office which was approved.

Mr. CALDWELL. Have you a copy of that proclamation?

Gen. BABBITT. I have not with me.

Mr. CALDWELL. Will you put it in the record?

Gen. BABBITT. Yes, sir. Mr. Chairman, I have a detailed statement of just what these men are doing, under five different headings, and that will show just where they are:

The authority for increasing the enlisted personnel of the Ordnance Department to 20,000 men is contained in section 3, paragraph I of General Orders, No. 103, War Department, August 6, 1917, which states as follows:

"Under authority conferred by section 2 of the act of Congress 'Authorizing the President to increase temporarily the Military Establishment of the United States,' approved May 18, 1917, the President directs that there be organized for the period of the existing emergency, the enlisted strength being raised and maintained by voluntary enlistment or draft, an enlisted Ordnance Corps, National Army, of the following personnel: Ordnance sergeants, 2,800; sergeants, first class, 400; sergeants, 2,000; corporals, 3,600; cooks, 400; privates, first class, 3,600; and privates, 7,200; total, 20,000."

The duties of these men can be stated under general headings, as follows:

Attached to line organizations of 16 divisions of the National Army---	2, 500
Attached to line organizations of 16 divisions of the National Guard--	2, 500
Ordnance depot companies assigned to 16 divisions of the National Army--	2, 500
Ordnance depot companies assigned to 16 divisions of the National Guard	2, 500
Detachments with Army corps troops, with Army troops, at main bases, at ports of embarkation, at ports of debarkation, at artillery parks, at repair stations, etc-----	10, 000
Total -----	10, 000

The CHAIRMAN. I will ask you to put that in the hearings, and also a statement showing just where you expect to use these 20,000 men.

Gen. BABBITT. Yes, sir. I would like to say, however, Mr. Chairman, that that number will undoubtedly be exceeded in the near future, and we will have to request authority for a larger number than that.

Mr. KAHN. How many men do you think you will require in the next fiscal year?

Gen. BABBITT. My notes indicate a total requirement of 68,811.

Mr. KAHN. When was this estimate submitted to the department—in September?

Gen. BABBITT. In September; yes, sir.

Mr. KAHN. Did you know at that time that 20,000 men would be entirely inadequate for the needs of the Ordnance Department?

Gen. BABBITT. We did not. The requests are coming in constantly indicating the need for more men for handling ammunition and other ordnance supplies and for performing other ordnance duties in France. We need, for example, 10,000 right at the port of debarkation for handling the ammunition which is to be passed on to the dumps.

Mr. KAHN. Do you think that 68,000 will absolutely meet your needs for the next fiscal year, or will you require even more than that?

Gen. BABBITT. The number of men we will need, of course, will be dependent upon the number of men sent abroad. A large portion of these men go with the line units. Every regiment is provided with a certain number of ordnance men to make the immediate repairs, to assist in salvaging the ordnance material, and to get it back where we can recover it and repair it. Each Infantry regiment, for example, has two sergeants, three corporals, and five privates. The Cavalry regiments have more and the Artillery regiments still more. Then we have with each division mobile repair units. These have not been tried out yet, but we are going to need more men in every way. There are 12 trucks to go, three of which carry machinery for repairing small arms and other equipment. We may need a larger number of men than this.

The CHAIRMAN. As I understand you, then, the number of men in your department will depend upon the size of the total Army to a large extent?

Gen. BABBITT. Yes, sir.

The CHAIRMAN. What size army are you estimating for when you ask for 20,000 men?

Gen. BABBITT. 1,600,000.

The CHAIRMAN. What size army are you estimating for when you ask for 68,000?

Gen. BABBITT. I am wrong about that. Our original idea was that 20,000 men would meet our requirements for a force of 1,600,000, but the demands for men on the lines of communication, for the dumps, and for other service abroad indicate we will need 68,000 instead of 20,000 for that number.

Mr. KAHN. I understand in the various training camps and in the various posts and fortifications we now have 1,600,000 men, and I understand the War Department officials are going to call for another 500,000 under the draft law some time in the spring. Will your 68,000 men be sufficient to take care of that additional 500,000?

Gen. BABBITT. Not quite, but the number will not go up proportionately. We will probably want about 10,000 additional.

Mr. KAHN. That would make 78,000.

Gen. BABBITT. Yes.

Mr. McKENZIE. General, in estimating this number of men, do you know how many men are required at the different camps and cantonments at the present time?

Gen. BABBITT. Yes, sir.

Mr. McKENZIE. You have taken that into consideration?

Gen. BABBITT. Yes, sir.

Mr. McKENZIE. Then you have also estimated for an army of 1,600,000 men in France?

Gen. BARRITT. Yes, sir.

Mr. McKENZIE. And the 68,000 is to take care of an army of 1,600,000 men in France and still continue the efficiency of the force now at the various camps in this country?

Gen. BABBITT. Yes, sir.

Mr. McKENZIE. Therefore the whole ground would be covered because you do not anticipate you will have an army to exceed 1,600,000 men in France during the fiscal year 1919?

Mr. KAHN. Oh, yes.

Gen. BABBITT. I hope so. Independent of any movement to France, if we call to the colors and organize additional units, we will have to put with all these regiments additional men, and those are the only ones I refer to. Our arrangements under the 68,000 will naturally take care of the biggest part of the expansion, in that it takes care of the very large enlisted force we will require along the lines of communication and at our base depot or depots in France where we do all the repair work. The units in this country at the cantonments also will have to be provided for, but there will be no great enlargement there. It is solely then the question of taking care of the troops which are organized as a part of the units here, and that is all we would have to take care of except some slight additions, due perhaps to the increased volume of work at the established plants, but that would not be anything like the same ratio.

Mr. CALDWELL. Will these men carry arms themselves, or will they be more like working troops?

Gen. BARRITT. Very few will carry arms, although they will have to do a certain amount of guard work, of course.

Mr. SHALLENBERGER. General, you are estimating here the number of ordnance troops you will need for the fiscal year beginning the 1st of next July?

Gen. BABBITT. Yes, sir.

Mr. SHALLENBERGER. Is it humanly possible for you or for anyone else to estimate within 25,000 or 50,000 of what we are going to need a year and a half from now in France? Is it not a very indefinite thing at best, and can we expect to get down to a close estimate of the number of troops we will need?

Gen. BABBITT. I think it unlikely, sir; but I think it would be a matter of discretion on our part to estimate the higher unit.

Mr. SHALLENBERGER. I think so myself, and there is no necessity for disputing here about a few thousand.

Gen. BABBITT. If we do not need them we can save that money, because of course we do not have to spend it.

The CHAIRMAN. Following the suggestion which has already been made, I wish you would put in the record a statement giving an estimate of the total number you will need under any circumstances.

NOTE.—It is estimated that for an army of 1,600,000 men, the Ordnance Department will require an enlisted force of 68,000 men; and for each increase of 500,000 men in the line of the Army, the enlisted force of the Ordnance Department should be increased by 12,000 men.

There is one other question I want to ask you General, on this line: Gen. Crozier stated that one purpose for which he used enlisted men in his department was for guard duty at camps and cantonments, which required about 150 men in his department. Now, we will have

to explain that on the floor. Why can not that guard duty be done by the troops?

Gen. BABBITT. I think that is an error. I have not had time to read Gen. Crozier's testimony, but the guard duty is done at our arsenals in places where there are no line troops. At the cantonments there are men of whom we have 150 now, 100 for our supply work there in the handling of the supplies at the workhouses, etc., and 50 men with our mobile repair depot. The 100 men stay at these cantonments and the 50 men go with the division with the motor repair trucks.

The CHAIRMAN. What duty do they perform at the cantonments? I understood that they were used as guards.

Gen. BABBITT. No, sir; they are in our warehouses for the issue of supplies. Naturally we must have men who are technically trained in that work—in the handling of small parts for repairs, etc.

Mr. TILSON. Do you use some of these men as guards?

Gen. BABBITT. At the arsenals.

Mr. TILSON. I saw some at the Frankford Arsenal the other day.

Gen. BABBITT. Yes, sir. We use a good many of them as guards at the arsenals.

The CHAIRMAN. Unless there are some other questions, we will pass to the next item. The next item provides for additional pay for length of service. That is based upon the law as to the actual facts, and I do not suppose there will be much of that, as these men will not have the length of service.

Gen. BABBITT. No, sir.

The CHAIRMAN. The next item is on page 19, for the pay of 2,000 officers. Are you familiar with that item, General?

Gen. BABBITT. My attention was not called to that particular item. I might say, however, that that item will have to be largely increased. The Ordnance Office submitted an estimate to the Chief of Staff for its personnel in May or June, amounting to approximately that number. In September that number was revised, and the number that now stands is approximately 5,375. I will have to correct that number, because I am only giving it from memory.

The CHAIRMAN. You can put the actual figures in the record.

Gen. BABBITT. That number, I understand, has been approved by the committee of the War College handling this subject and is before the Secretary for final approval as to numbers, but not as to the grades.

The CHAIRMAN. How many officers have you there now?

Gen. BABBITT. We estimated for about 5,375. We have, I think, 1,500; but on that question I will have to correct the figures. I brought my notes solely on the enlisted personnel.

The CHAIRMAN. Put in the record exactly what the figures are.

NOTE.—The number of officers called to active duty up to December 12, 1917, is 2,619.

Mr. SHALLENBERGER. I understood you to say that this amount would have to be greatly increased?

Gen. BABBITT. Yes, sir.

Mr. SHALLENBERGER. Will you put in the record your estimate of what you think it ought to be now, based upon the information you now have as to how much it ought to be?

Gen. BABBITT. Yes, sir.

Mr. GORDON. How can you estimate for the officers if you do not know their rank or grade?

Gen. BABBITT. We will have to get the grades finally approved by the Chief of Staff and get instructions as to what grades we will commission these men in. Then the Quartermaster General will be able to make up a statement for the record from the grades as finally approved by the Chief of Staff.

Mr. SHALLENBERGER. These ordnance officers will have to be taken largely from civil life?

Gen. BABBITT. Almost entirely.

Mr. GORDON. You have transfers from the Cavalry into the Ordnance Department, do you not?

Gen. BABBITT. From the Cavalry, Infantry, and Artillery. All of them have furnished their quota.

The CHAIRMAN. The next item is on page 61. For the current expenses of the Ordnance Department in connection with purchasing, receiving, storing, and issuing ordnance and ordnance, stores, etc., you ask \$25,500,000. Do you remember what the total appropriation was under the three bills last session?

Gen. BABBITT. The total appropriation amounted to about \$16,000,000. In the May act there was carried \$350,000, in the June act \$2,650,000, and in the October act \$11,825,000, making a total of \$14,825,000.

The CHAIRMAN. Will you explain to us why that increase is estimated?

Gen. BABBITT. This item covers three important operations; one, although under this it is a relatively small amount, is the current expenses of our arsenals, including the handling of stores at those points, which amounts to about \$2,500,000 under war conditions. The second item is a pure estimate of approximately \$9,500,000 for the pay of laborers that we must hire in France other than our enlisted personnel. Gen. Pershing reported to us that in his project for our lines of communication for our base depots and for our repair units we would require, in addition to our enlisted personnel, 11,000 laborers, which he hoped we might be able to employ there. It is for those 11,000 laborers that this item to the extent of about \$9,500,000 refers. In addition to that, \$13,500,000 relates to our operations at our ports of embarkation and debarkation. Gen. Wheeler has the details, as that subject falls under his particular administration. I can probably give it to you myself very roughly, unless you wish to ask some special questions about it.

The CHAIRMAN. You might state it in general terms.

Gen. BABBITT. It relates to the handling of stores at the various terminals. This is for the employees there. For labor charges in the loading and unloading of cars, both in and out of terminal depots, it is estimated that there will be 154,000 cars handled at a total cost of \$4,235,000. At interior depots for similar operation the amount estimated is \$4,345,000. At component depots, which are depots where component parts of material are stored before they can be brought together and assembled, the amount estimated is \$1,485,000. For heat, light, power, and water and operating supplies at those points, the estimate is \$1,710,000. For the maintenance of depots,

repairs and renewals of buildings, railroad equipment, mechanical equipment, etc., the amount estimated is \$4,000,000. For the rental of warehouses—we estimate on renting 1,000,000 square feet of space—the estimate is \$400,000. For contingent expenses, including the erection of temporary buildings, which we have to do from time to time for our supplies, the estimate is \$1,825,000, making a total of \$18,000,000, instead of the \$13,000,000 to which I referred, and which is included in the bill as presented to you. In other words, it is desired to increase this estimate by \$5,000,000.

Mr. KAHN. You increase this \$5,000,000?

Gen. BABBITT. From \$13,500,000 to \$18,000,000.

The CHAIRMAN. You want a total increase of——

Gen. BABBITT (interposing). \$4,500,000; that increase being the result of additional information that has reached us from abroad.

Mr. KAHN. You are asking for \$25,500,000?

The CHAIRMAN. You are asking now for \$30,000,000?

Gen. BABBITT. Yes, sir.

Mr. CALDWELL. Do you think that this will carry you through until July 1, 1919?

Gen. BABBITT. It is impossible to predict with any accuracy so far ahead with this tremendous movement going on. We are basing our estimates on our probable ability for transporting supplies.

Mr. KAHN. General, I heard the statement made by Gen. Joffre, when he was over here, that we would have to furnish everything for our own troops—that we could depend on nothing from France or from England. Have you taken that into consideration in these estimates, and do you propose to ship every pound of munitions that will be required by our forces?

Gen. BABBITT. Ultimately; yes, sir. In the initial stages we expect some assistance from them for which we will make replacement of material when we get it.

Mr. KAHN. In this war, ordnance is the most important thing, almost.

Gen. BABBITT. Yes, sir.

Mr. KAHN. Is your department expending in such a way that you can furnish everything that will be required for our troops over there and in sufficient quantities?

Gen. BABBITT. We are expending as fast as the manufacturing facilities of the country will permit us.

Mr. KAHN. Could we, if we wanted to, get any assistance for our troops in any of the foreign countries that are cooperating with us?

Gen. BABBITT. We are getting temporary assistance in the way of supplies.

Mr. KAHN. Could that temporary assistance be made permanent if the situation required it?

Gen. BABBITT. I think not.

Mr. KAHN. Then we will have to depend altogether, in the final analysis, on what we ourselves can do in this matter?

Gen. BABBITT. I think so; yes, sir.

Gen. Wheeler would like to make a statement in reference to this matter.

Gen. WHEELER. In answer to a question asked of Gen. Babbitt in regard to the amount asked for under the item for the ordnance service, I would like to say that the \$18,000,000 that we are estimating for under this item for the maintenance of storehouses is based upon the assumption that we are maintaining an army of 1,500,000 men in France, that the army in France is being recruited at the rate of 100,000 men per month, and that we are maintaining in this country an army of 500,000 men. That will involve the shipment of 56,000 cars per month. If the plans change between now and the time this bill goes into effect, so as to increase the army materially, the \$18,000,000 we are asking for will not be sufficient.

Mr. McKENZIE. Did I understand you to say that this involves the shipment of 56,000 cars per month?

Gen. WHEELER. Yes, sir.

Mr. KAHN. Gen. Babbitt, I believe, stated that he would require 11,000 Frenchmen and Frenchwomen to help them at the points of debarkation in France in the handling of these ordnance stores, and that he would require about \$4,000,000 for their pay?

Gen. BABBITT. About \$9,500,000.

Mr. KAHN. Is the pay for these people in France anywhere near what the pay would be over here, or are you asking that much?

Gen. BABBITT. We are really estimating that on the possibility that we might have to send the laborers over there to do the work.

Mr. KAHN. Of course we know that the pay there is much less than the pay of Americans, and I could hardly see why you would want such a large amount for the employment of 11,000 French laborers; but, of course, taking into consideration the fact you may have to get Americans to do the work, I can readily see the need of it.

Mr. CALDWELL. You say that you base your estimate on an army of 1,500,000 in France; does that estimate contemplate an army of 1,500,000 men in France now, or are your estimates based on the assumption that you will have 1,500,000 men there in June, or that that number will go over in the fiscal year 1919? In other words, are you taking the maximum for the whole year?

Gen. WHEELER. We are considering that we shall have in about a year after the war started that many men in France, and that we will be maintaining that many.

Mr. CALDWELL. That will be in April.

Gen. WHEELER. Beginning in September, we are estimating on an average of about 100,000 troops per month, and as soon as we accumulate 1,500,000 troops over there we will be maintaining that 1,500,000 troops; and for replacement purposes there will be constantly in training in this country troops to the extent of 500,000 men. It is further estimated that we are going to send with our

troops a four months' supply—a one month's supply for expenditure during the month when the man receives his supplies and a constantly maintained supply for three months. Then, there will be a month's supply on the road or on the water, and we will maintain the reserve in France by a three months' supply in this country.

Mr. CALDWELL. So it is based broadly on the number of troops you will have in training and in France?

Gen. WHEELER. Our estimate is also partially based upon the record that our allies have made up to the present time in the shipment of supplies. I am informed that the trip for months has averaged eight weeks.

Mr. KAHN. The round trip takes eight weeks?

Gen. WHEELER. Yes, sir; but we are hoping to do better than that.

Mr. CALDWELL. The transports are moving faster than that?

Gen. WHEELER. Yes, sir.

The CHAIRMAN. Is there any other statement you wish to make on this item?

Gen. WHEELER. I think there is nothing further I wish to say on the subject, unless the committee desires more information or details.

Mr. GORDON. I understood you to say that your plans under the appropriation asked for contemplated the shipment of 56,000 cars per month?

Gen. WHEELER. Not their shipment abroad. Fifty-six thousand per month is the movement; some of them will be in interior movements.

Mr. GORDON. What proportion of these 56,000 cars will be sent abroad for maintenance purposes?

Gen. WHEELER. We would have 21,000 cars for shipment abroad. I might say that that is really double the actual number of cars leaving our Atlantic ports. That number would be about 10,000 cars, but we have doubled this year so as to take into account the loading of those cars on ships. We have to take that into our calculations, because we are taking it in carload lots, but the actual number of cars leaving the Atlantic ports for shipment abroad per month will be 10,000.

Mr. GORDON. That would be about 420,000 tons per month?

Gen. WHEELER. Yes, sir; something like that.

Mr. GORDON. When do you figure on commencing these shipments?

Gen. WHEELER. We have already commenced the shipments. The total volume, of course, depends on the number of troops abroad.

Mr. GORDON. And it also depends on shipping facilities?

Gen. WHEELER. Yes, sir.

Mr. SHALLENBERGER. Have you been able to carry over supplies in sufficient volume for all the troops you have there at present, or have you been delayed by the scarcity of shipping?

Gen. WHEELER. No, sir; we have not been delayed up to the present time.

Mr. SHALLENBERGER. You think that a sufficient volume can be carried over for the troops you have there?

Gen. WHEELER. Yes, sir.

Mr. CALDWELL. As a matter of fact, you are accumulating a surplus over there now, are you not?

Gen. WHEELER. Yes, sir; we send a reserve over there with all the troops that go over.

The CHAIRMAN. The next item, Gen. Babbitt, that you are interested in, according to this note, is on page 63, for national trophy and medals for rifle contests.

Gen. BABBITT. That is an annual appropriation that is made year after year for that purpose. It is handled entirely by the office of the Assistant Secretary of War, the Ordnance Department simply acting as a disbursing agent for that purpose.

Mr. TILSON. Is the carrying on of these contests in any way interfered with by the progress of the war? Has that made any difference with the national trophy contests?

Gen. BABBITT. They had contests this last year, but what will be the result I do not know.

Mr. TILSON. It says, "Said contests to be open to the Army, Navy, Marine Corps, and the National Guard or Organized Militia of the several States," etc. There is no National Guard or Organized Militia, and it seems to me that this is practically eliminated. I do not mean to say that I wish to have it eliminated or interfered with, but it seems to me that it has been eliminated by the force of events.

Gen. BABBITT. The War Department might decide at any time that they might spend that.

Mr. HULL. The States may still organize militia troops if they want to.

Mr. GREENE. As a matter of fact, the Army is filled practically to the extent of one-third by our National Guard troops, and they are so designated as National Guard troops. The Army consists of the Regular Army, the National Guard, and the National Army. There are three distinct wings.

Mr. TILSON. Could these contests be carried on by the National Guard or by anybody else now in the service at the present time?

Gen. BABBITT. I doubt very much whether it could be done.

Mr. HULL. If you have National Guard organizations in the States, you could use it.

Mr. TILSON. They may have some plan to spend it.

Gen. BABBITT. I have no means of knowing. The subject pertains to the Secretary's office.

Mr. GREENE. I think it would be a good thing for morale purposes to have rifle matches in the Army.

Mr. GORDON. They have rifle practice as a part of their regular training.

Mr. GREENE. But when you add a little competition to it, you keep their spirits up.

Mr. KAHN. It would altogether depend on the attitude of the War Department as to whether they held these contests?

Gen. BABBITT. Yes, sir.

The CHAIRMAN. Under ordnance stores and supplies, you are asking for \$93,400,000 and last year you had \$230,070,000.

Gen. BABBITT. Yes, sir.

Mr. TILSON. General, I understand you are doing a great deal and preparing to do a great deal more in the way of salvaging ordnance material?

Gen. BABBITT. Yes, sir.

Mr. TILSON. And that is a part of this expense?

Gen. BABBITT. Yes, sir. We are endeavoring now to have with each division of the Army motor-repair units that carry small repair outfits and go right with each regiment, and the companies send them their supplies and they are taken care of right there, so that minor repairs can be made at once. In addition, we will have larger salvage units where material is taken to be repaired.

Mr. TILSON. The British have established large salvaging depots, as it were, for instance, at Calais, where all sorts of things are brought in large quantities and salvaged. For instance, old shoes are washed up, resoled, and repaired and sent back again to be worn, and all sorts of things are fixed up. We are preparing to do the same thing in regard to ordnance, I presume.

Gen. BABBITT. Yes, sir. The Quartermaster General also is doing that.

Mr. CALDWELL. Why do you reduce this appropriation from \$230,000,000 to \$94,000,000 for 1919?

Gen. BABBITT. The estimate as it appears here was relatively small, because we were figuring on the last year's appropriation in equipping and maintaining 2,600,000 men. After we had prepared our original notes on the basis of maintaining 3,600,000 men and equipping additional units, it was decided that the number to be considered was to be reduced to 1,600,000. Therefore we have very little to do but to maintain the 1,600,000 men, and that is a very small amount as compared with equipping a large unit of over 1,000,000 men. Ultimately, the maintenance, of course, will be a large item.

Mr. SHALLENBERGER. Then the explanation is that because we appropriated so generously a year ago you were able to equip from that sum the number of men you have now?

Gen. BABBITT. Yes, sir; when the number which we were working on was reduced, it left us approximately \$60,000,000 that we might apply toward maintenance for the next year; that is, buying supplies for 1918 for maintenance—so that we would need but \$30,000,000 more under the head of equipment.

Mr. GORDON. Can you tell me upon what theory the department estimates for 2,600,000 men when Congress has only authorized 1,000,000 less than that?

Gen. BABBITT. I can not; no, sir.

Mr. GORDON. Is it usual and customary in making appropriations for the Army for the War Department to undertake to make estimates for more men than Congress has authorized to be brought into the service?

Gen. BABBITT. It was presented to the Appropriations Committee that it was expected to call an additional 500,000 men at a certain time and then a second 500,000 men at a later period.

Mr. GORDON. That would only make 2,000,000, including the National Guard and Regular Army.

Gen. BABBITT. We have now, sir, 1,600,000 men.

Mr. GORDON. Including the National Guard and Regular Army?

Gen. BABBITT. Yes, sir; and we expected to call another million.

Mr. GORDON. You do not expect to call them until Congress authorizes them?

Mr. GREENE. It has already authorized them.

Mr. GORDON. When?

Mr. GREENE. In the original act.

Mr. GORDON. How many men do you claim Congress has authorized to be called into the service, including the National Guard and Regular Army? If this committee does not know, we ought to find out. I was under the impression that Congress had simply authorized the President to draft into the military service 500,000 men and, then, at his discretion an additional 500,000, in addition to the regular organization of the National Guard and Regular Army; is that correct?

Gen. BABBITT. That is my understanding of it.

Mr. GREENE. With such additional special and technical troops and other accessories as the President in his discretion might provide.

Gen. BABBITT. The numbers are given us, of course, by the War College. We get data from them as to what they are planning.

Mr. KAHN. General, this estimate of \$93,400,000 which you are asking for is based on an Army of how many men?

Gen. BABBITT. 1,600,000.

Mr. KAHN. If 500,000 are added in the spring, will this amount be adequate?

Gen. BABBITT. No, sir.

Mr. KAHN. How much more will you require? Can you put that in the hearing?

Gen. BABBITT. I can put that in the hearing. I can only state now that I have the data here with reference to the figures we were working on and which contemplated, instead of 1,600,000, 3,600,000; and we would need for that purpose \$232,700,000 under this item.

Mr. KAHN. If they add 500,000 in the spring, and this Congress should authorize for the year 1919 1,000,000 more, and this appropriation runs until the end of the fiscal year 1919, can you also put into the hearing how much more you would require?

Gen. BABBITT. That is a total of 1,000,000.

Mr. TILSON. One million more than at present authorized.

Mr. KAHN. Exactly; put into the hearings how much more you will require for the next increment of the National Army which has already been authorized, which would be 500,000 men. In addition to that, will you kindly put into the hearing how much you will require if the draft law is amended so that before the end of the fiscal year 1919 we should get one and a half million more men into the field? You can take it by increments of 500,000.

Gen. BABBITT. If the men have to be brought in all at the same time and maintained from that time, then it is a constant unit; but if you are bringing them in at intervals along during the year, of course we do not provide for maintenance for the same length of time.

Mr. CALDWELL. In other words, if we draft them every three or four months, you would have three or four months when you would not have to provide for maintenance.

NOTE.—The amount required for equipping and maintaining a force of 100,000 men is estimated at \$127,900,000, and for every additional 500,000 men the sum should be increased by \$90,300,000.

Gen. BABBITT. Yes. Col. Hoffer has a memorandum with reference to the necessity for increasing this appropriation.

Mr. KAHN. Col. Hoffer, you want an increase for the 1,600,000 men anyhow?

Col. HOFFER. Yes, sir. Mr. Chairman, the estimate under ordnance stores and supplies of \$93,400,000 includes an item of \$28,300,000 for various miscellaneous material pertaining to trench warfare matériel, and particularly, to bomb-dropping aeroplanes; items which can not properly be placed under other appropriations, such as reflex lights, illuminating rockets, signal rockets, position lights, smoke torches, aeroplane flares, bomb sights, releasing mechanism, etc. Based upon an army of the same size, and in accordance with which all the other estimates were made, the sum required for this purpose is estimated at \$28,300,000; but it has been found necessary to revise our estimates for three reasons: In the light of later information an increase in the estimated expenditure per month in hostilities, the requirement for more substantial reserves than previously contemplated, based upon recommendations from Gen. Pershing, and a material increase in the number of bomb-dropping aeroplanes, data in regard to which was very indefinite at the time the original estimates were submitted. In the light of this new information it is found necessary to ask for an increase of \$34,500,000.

Mr. KAHN. That would make \$62,800,000 for this class of material?

Col. HOFFER. Yes, sir. The additional sum of \$34,500,000 asked for may be divided into two parts: That required to meet the deficiency in our estimates up to September 1, 1918, of \$18,200,000, which was supposed to have been covered in the urgent deficiency bill approved October 6, and the remaining sum is to cover the deficiency in our estimates submitted under this bill of \$16,300,000, approximately, making the total additional sum required \$34,500,000, of which \$18,200,000 should be available as promptly as possible.

Mr. SHALLENBERGER. Do I understand that this increases this item of \$93,400,000 by \$34,500,000?

Col. HOFFER. Yes, sir.

Mr. CALDWELL. And you say you want \$18,200,000 to be available at once?

Col. HOFFER. Yes, sir.

Gen. BABBITT. I think it would not be necessary to provide that that sum should be immediately available if this clause of special legislation is accepted by the committee, which reads:

The appropriations made in this act shall be available for the payment of obligations on account of the existing emergency incurred prior to the passage of this act and which are properly chargeable to such appropriations.

Mr. KAHN. But the colonel said that in September, 1918, this deficiency of \$18,200,000 would arise.

Mr. HOFFER. I did not mean to convey that impression. I meant to say that the \$18,200,000 should be available, so that we can now secure the material which should be on hand by September 1, 1918.

Mr. CALDWELL. Then you would have to have a special clause making that \$18,200,000 immediately available?

Gen. BABBITT. Not under this clause of special legislation.

Mr. CALDWELL. That covers only past obligations. You want to obligate this amount between now and the 1st day of July.

Gen. BABBITT. If he is authorized by the Secretary of War to spend \$18,000,000 for a purpose for which this appropriation is applicable and this clause is adopted——

Mr. CALDWELL (interposing). But that clause says, "Any obligations incurred prior to the passage of this act."

Gen. BABBITT. Yes, sir.

Mr. CALDWELL. The colonel wants to make the obligations after the passage of this act, but pay for them before the 1st of July. We are appropriating here for the fiscal year beginning July 1, 1918, and running to June 30, 1919, and in the meantime, in September or in June, he expects to incur some of this liability, and there ought to be a provision in here making that amount immediately available. Am I not right, Col. Hoffer?

Col. HOFFER. Yes; under existing legislation we can not contract for any material without either having the actual funds or contract authorization, so that without some legislation it would be impossible to enter into any contract to cover any portion of this sum, and the point I wish to make is the necessity for having at least this amount available at the earliest possible date. I think the entire sum should be available before June 30, 1918, in order that contracts may be entered into.

Mr. KAHN. I think it has been the custom of the bureau to enter into agreements for the expenditure of the money even before the beginning of the fiscal year, but the payments are not made until the money is available.

Mr. GARRETT. Can you not put a saving clause in here providing that the money shall become available when contracts for supplies have been made and approved by the War Department and in such amount as such contracts are made?

Gen. BABBITT. He could do that now, sir, if this material is delivered after June 30. We have always done that. In ordinary peace times, for instance, if this act passed in April, we would make all our contracts and arrangements and begin deliveries July 1 and make payments at that time.

The CHAIRMAN. I was called from the room to answer the telephone, and I have not heard your statement. You want to make this available before the 1st of July?

Col. HOFFER. Mr. Chairman, I requested that \$18,200,000 be made available at the earliest possible date to cover the deficiency in the estimate on the funds for materials which should be available by September 1, 1918.

Mr. TILSON. Of course, it would be impossible to separate what would be payable before July 1, 1918, and what afterwards.

Col. HOFFER. We need it all in order to enter into the contract.

Mr. CALDWELL. Col. Hoffer wants to make the contract and provide that part of it shall be deliverable before the 1st of July, 1918.

Mr. MCKENZIE. From what I have been reading, it seems to have been the policy, announced through the newspapers, that in certain branches of the War Department they have adopted a policy of making contracts, for instance, with a concern and advancing them

money, not only to buy material but in some instances to build buildings and buy machinery. That has not been the policy of your department in any instance, and that is not involved in this appropriation, is it?

Col. HOFFER. It may become involved, and for that reason, in my opinion, the funds covered by this bill should be made available upon the passage of the bill. Under authorization confirmed by Congress, advanced payments not to exceed 30 per cent can be made under such regulations as the Secretary of War and the Secretary of the Navy may promulgate, and there has been established by the Secretary of War a War Credits Board, which passes upon such cases. Furthermore, the contracts are of such magnitude in individual cases, and the financial condition of the country is such, that it has been found necessary to award our contracts in such a way as to assist in every possible way the contractor in preventing him from having tied up in this particular order any more capital than is necessary. For that reason, if we provide additional facilities we arrange to pay for them promptly. As the material is put in, we pay for it upon receipt of the proper vouchers, O. K'd by our inspector, and, furthermore, we make arrangements whereby we furnish in many cases the raw material, which must be paid for as soon as delivered. Therefore we have many financial obligations to meet in the payment of actual money before the delivery of the finished article begins, and that is the general practice at the present time with reference to the classes of artillery coming under artillery-ammunition and trench-warfare matériel.

Mr. QUIN. Have you exhausted the last appropriation of \$230,000,000?

The CHAIRMAN. Mr. Quin means the appropriations made at the last session of Congress in the three different bills.

Col. HOFFER. The bills for last year only carried for this particular class of material \$4,520,000, which is a very small sum, and that entire amount has been obligated.

Mr. GORDON. How about the entire \$230,000,000? Has that been used?

Col. HOFFER. I can only speak for the particular classes of material that I am attempting to cover.

Mr. McKENZIE. I understood Gen. Babbitt to say there was about \$60,000,000 of that still available.

Gen. BABBITT. This is under just one item. I will give you just what remains.

The CHAIRMAN. You can put a statement of that under each item in the record, General.

Gen. BABBITT. All right, sir. We have about \$97,000,000, roughly.

Col. HOFFER. Mr. Chairman, I may state in this connection that while the appropriation is available for these different classes of material, it is all in accordance with certain carefully prepared estimates, and in the practical application of these funds it is almost equivalent to having these appropriations contain subheads appropriating a certain amount for each class of materials.

Mr. GREENE. In other words, you endeavor to estimate and account to yourselves through different classifications whether the law requires it shall be done or not?

Col. HOFFER. Yes, sir.

Gen. BABBITT. In this particular case, for example, there is one division of the office known as the equipment division, which handles a certain portion of this fund and which is credited with \$30,000,000, and another division known as the gun division, which is credited with \$28,000,000, which they desire a further increase in of \$34,000,000 for the special items referred to, and the carriage division, which is credited with \$35,000,000, nearly all of which will go for artillery harness. Each one of those divisions is responsible for spending that money for the items which they handle, and the Chief of Ordnance holds each division very closely responsible for carrying out the projects.

Mr. CALDWELL. But the Chief of Ordnance has authority, and frequently does, does he not, exercise the authority, and where they find they have overestimated one branch, as in a case like this, and underestimated another, order a transfer of a certain portion of the fund from one branch to the other?

Gen. BABBITT. Very seldom.

Mr. CALDWELL. But he has done it?

Gen. BABBITT. It is possible for him to do so, but the division has to make an exceedingly good case for him to make any departure from the project as presented to you, and it would have to be such a one as he would be willing to defend fully and say to you, "We have done this for the following reasons." I do not recall more than one or two cases in my three years here in which we have made any departure.

Mr. CALDWELL. But in 1916 he transferred the money that was appropriated for building rifles and had pistols made out of it, and instead of making the rifles in the arsenals he had pistols made in private establishments. Am I not right about that?

Gen. BABBITT. I could not say offhand about that.

Col. HOFFER. That would come under the same division of the office.

Gen. BABBITT. But, even then, the division would be held as close as possible to the figures given here.

Mr. WISE. General, is there any way by which we can take the appropriation made last year, of over \$200,000,000, and know what we have got for that money; just what ordnance has been manufactured?

Gen. BABBITT. We can give you that in the form of orders placed.

Mr. WISE. I understand about the orders placed, but what I want to know is how much actual material we have got for it and where it is.

Gen. BABBITT. We can give you exactly how much has been delivered of those orders.

Mr. WISE. I would like to have some information along that line; not what we have got contracts for, but what we have got now.

Gen. BABBITT. If it is a matter of personal information, perhaps the quickest way to arrive at it would be to look at our production charts, where there is plotted, for every item we make, the total amount that has been ordered and the amount that has been delivered. These are kept up to date. I have, for example, in my own office in a case which is kept locked, so it is not subject to inspection

by unauthorized persons, charts on which are given all that information, and the other divisions have similar charts.

NOTE.—See testimony of December 12, 1917.

Mr. WISE. Do you know where all of that material is located?

Gen. BABBITT. Yes, sir. It is turned over to the supply division, and they can tell you where it is located, even if it is in transit.

Mr. SHALLENBERGER. You were to prepare some figures showing the surplus fund you still have in reserve under this item.

Gen. BABBITT. Yes, sir; I will put them in the record. There are about \$97,000,000 of that total sum not expended.

Mr. TILSON. Does that mean that no contracts have been made?

Gen. BABBITT. The contracts have been made, but that amount simply stands on our books.

Mr. TILSON. And you have more than six months to run before the end of the fiscal year?

Gen. BABBITT. Yes, sir. Of course, these moneys were not given to us until October.

The CHAIRMAN. Have you anything further to say on that item, General?

Gen. BABBITT. I have nothing further to say; no, sir. As I said, it is entirely a question of the number of troops that are to be supplied.

The CHAIRMAN. Mr. McKenzie asked you a question a moment ago that he said he wanted to pursue further. Perhaps you can explain it now: Did not the Appropriations Committee in one of its bills, either in that of June 15 or the bill of October 6, authorize the War Department generally to advance money to private manufacturers?

Gen. BABBITT. I do not recall which bill it was. It happened to be one in which I was not interested.

The CHAIRMAN. That law only applied during this fiscal year, as I understand it?

Gen. BABBITT. I think it applied solely to that bill.

Mr. OLNEY. I would like to ask the general a question as to the kinds of rifles that are used. Are they using Springfields, Enfields, and Kraggs? Are the Kraggs serviceable to the men for training purposes?

Gen. BABBITT. That is all they are intended for, and they are being replaced.

Mr. OLNEY. Do they furnish the Springfield rifles now?

Gen. BABBITT. Both the Springfield and Enfield rifles.

Mr. OLNEY. Are you supplying enough rifles to meet the demand?

Gen. BABBITT. Col. Thompson can tell you more about that.

Mr. GORDON. As I understand you, on the question of additional appropriations, there are \$34,500,000 in addition to the estimate of \$93,400,000?

Gen. BABBITT. Yes, sir; an increase of \$34,500,000 beyond \$93,000,000.

Mr. GORDON. What are the reasons for that?

Mr. KAHN. He gave that, Mr. Gordon. He spoke of the aeroplanes and the necessity of giving them additional bombs and things of that sort in connection with the flying squadron. He went into that.

Mr. GORDON. It did not seem clear to me.

Col. HOFFER. Three considerations resulted in this increase in the estimates. An increase in the estimated expenditure per month during hostilities was made. In other words, the amount to be expended for a given force was underestimated, and the revised estimate, based on late information, indicates that we must provide a greater number for expenditure in hostilities.

Mr. GORDON. Is that because of the increased force?

Col. HOFFER. No, sir.

Mr. GORDON. That is, taking the same number of men and machines?

Col. HOFFER. There has been a slight increase in the force, too, because the estimates which were submitted for this class of material last year were based upon a million men, so that a part of this increase is due solely to the larger force now being considered. The second consideration was the requirement for a more substantial reserve than was previously contemplated. That is based upon the recommendation of Gen. Pershing that we must have a larger reserve.

Mr. GORDON. How much of it is reserve and how much of it is intended for the fiscal year ending June 30, 1919?

Col. HOFFER. Of this amount, \$4,200,000 is for reserve and the remainder is for expenditure.

Mr. GORDON. I would be glad if you would do that. I think the committee ought to be in a position to state on the floor of the House just how much they are appropriating for reserve and how much for the fiscal year for which they are appropriating. As you know, there is a constitutional provision which we are frequently reminded of on the floor of the House which prohibits Congress making appropriations for the Army for a longer period than two years, and I, myself, have been charged, or this committee has been charged, already with attempting to anticipate a possibly hostile Congress and to appropriate in advance money that the next Congress might be reluctant to appropriate. That is a pretty serious charge to make, and, as far as I am concerned, I would be glad to be able to refute it successfully if anyone makes it. We want to be in a position to state on the floor of the House, if we can, just what we are appropriating for. If we are appropriating for a reserve of material that is not to be used for the fiscal year ending June 30, 1919, we ought to be able to state specifically how much that appropriation is.

Col. HOFFER. It is necessary in arriving at a reserve to consider all the elements that might affect production, delivery, shipment, and all other considerations. There must always be some reserve, and all of our estimates have been based upon having a reserve. For example, when a battery goes into action, or a man goes into action, there should be a certain amount or supply of ammunition in reserve.

Mr. GORDON. Your appropriations always contemplate that?

Col. HOFFER. When I speak about a reserve I simply mean that in accordance with the information received from abroad and in accordance with Gen. Pershing's recommendations, in order that there may be on hand on September 1, 1918, in France, or here for shipment to France, because shipments for expenditure on September 1 must start long before that time, we must have, in order to provide for expenditures for and keeping our troops supplied, this quantity of ammunition and supplies, the total estimated cost of which is represented by the sums I have given to you.

Mr. KAHN. In other words, you had better provide for any possible contingency that may arise over which you would have no control?

Col. HOFFER. Yes, sir.

Mr. KAHN. For instance, if two or three nitrate ships, bringing nitrates to this country were blown up, you would have to have a sufficient supply of powder on hand to take care of that contingency?

Col. HOFFER. Yes, sir.

Mr. TILSON. By providing a war reserve, that does not necessarily mean that it will not be used before June 30, 1919?

Col. HOFFER. No, sir; not by any means.

The CHAIRMAN. Is not a reserve to be stored away for use in some future years?

Mr. TILSON. I do not understand it to be that kind of reserve at all.

Col. HOFFER. It is not. It covers supplies which are necessary to insure the Army being operated as it is expected to operate during the year 1919.

Mr. GORDON. Of course, if you take into consideration such contingencies as Mr. Kahn speaks about, there would be no reason for asking the judgment of this committee on the amount to be appropriated. Of course, I do not quite agree with that contention.

Gen. BABBITT. You see, in getting our supplies over there and looking after troops some provision must be made for a lot of delay in shipments, and Gen. Pershing has laid down the rule that we must have on hand over there three months' maintenance supply. We estimate that they will use so much every day. One day they may not use it at all, but the next day they may use twice as much. This covers the average consumption. In other words, we must be prepared to ship over there enough to take care of them for three months in case something happens. Then we must have a month's supply in transit, and, finally, these figures contemplate about two months' supply in this country.

Mr. GORDON. Are you able to say how much of this reserve is provided for in this estimate of \$93,400,000?

Gen. BABBITT. We included a certain amount for it.

Col. HOFFER. We included some reserve in it, but now we have been obliged to revise the estimates in accordance with Gen. Pershing's recommendations, and we are giving them more.

Mr. GORDON. So, as a matter of fact, this additional \$34,500,000 is all intended to provide supplies for a reserve in addition to what was provided by the other estimates?

Gen. BABBITT. I do not term it a "reserve." That would be a misnomer. It is not a reserve in the sense that that term has been heretofore employed.

The CHAIRMAN. The next items are on pages 64 and 65.

Gen. BABBITT. Beginning on page 64, that item pertains to the loss of a small number of arms and some ammunition that was taken from striking miners in Colorado so as to prevent trouble there. They were taken both from miners and from the operators. The Federal Government took possession of them for the time. The authorities endeavored to ship all of this material to Fort Logan, and eventually it was to be redistributed to the owners. These claims, which amount to about \$7,800, have been looked into and the Ord-

nance Department thinks these claims are just. Their final adjudication, you will notice, is left to the Auditor of the War Department.

Mr. CALDWELL. Were these men rioting when they had their arms taken away from them, or did the Federal authorities go into private houses and take the arms?

Gen. BABBITT. They took arms away from everybody there, as I recall it.

Mr. CALDWELL. From people on the streets and from their homes?

Gen. BABBITT. From the homes and everywhere else. They went into the various mining towns. As you know, there was threatened a serious uprising, and not only the miners had arms in their possession which were taken, but arms were taken from the management of the companies who had accumulated them with a view to defending their plants.

Mr. CALDWELL. If a man is out on the street rioting with a firearm in his possession and unlawfully using it and it is taken away from him, that is nothing that he ought to be paid for, but if they went into the private houses of these people in the fear that some of them might take the law in their own hands, that is a different proposition.

Gen. BABBITT. These claims are of the latter class.

Mr. CALDWELL. This is where the firearms were taken from the houses of peaceable people?

Gen. BABBITT. Yes, sir. They took the names and gave them receipts, but the difficulty of the thing was that it had to be done so hurriedly and the Federal agents were so few in number and so unaccustomed to that class of work that they were unable to distribute back to the original owners all that they had taken, and on investigation it is found that they have claims which seem to be just in these instances.

Mr. FIELDS. Who has the final adjudication of these claims?

Gen. BABBITT. The Auditor for the War Department, and they also require the approval of the Secretary of War.

The CHAIRMAN. The next item provides:

That all material purchased under the appropriations for the Ordnance Department in this act shall be of American manufacture, except in cases when, in the judgment of the Secretary of War, it is to the manifest interest of the United States to make purchases abroad—

And so forth. You have stricken out the words "in limited quantities."

Gen. BABBITT. The words "in limited quantities" are taken out for the reason that we are purchasing and must purchase in much larger quantities from this time on from France and England for our immediate needs. We are purchasing a great many guns and much ammunition from them.

Mr. KAHN. Are you getting any very large guns from the French or English?

Gen. BABBITT. We are getting some few 6-inch guns of the howitzer type.

Mr. KAHN. Are you getting anything larger than that?

Gen. BABBITT. We may get some 8-inch, some 9.2-inch, and maybe some 9.5-inch howitzers.

Mr. CALDWELL. Do they shoot our form of ammunition?

Gen. BABBITT. We have to buy their ammunition, and we will have to make some of their ammunition in this country.

Mr. CALDWELL. Have we any factories already making any ammunition for these guns?

Gen. BABBITT. There were some manufacturers in this country making that ammunition before we went into the war.

Mr. MCKENZIE. This is not a question of buying guns in France, is it?

Gen. BABBITT. Yes, sir; and any other material. For instance, we have bought helmets.

Mr. MCKENZIE. On the question of the guns, are you being handicapped in the Army by the fact that a number of our gun-manufacturing establishments are being employed in the manufacture of guns for the Navy? In other words, do they have priority of contract over the Army?

Gen. BABBITT. I would like to have Col. Hoffer answer that question.

Mr. MCKENZIE. I wish to state that I read an article a few days ago discussing that very point of the necessity of having some authority in Washington with power to say to which branch of the service deliveries should be made first, and the article went on further to say that some 600 contracts had been entered into for the manufacture of guns for the Navy. Coupled with that I had the statement of Representative McCormick, of our State, who has been on the western front. He says that the only thing necessary to win this war, or, at least one of the great essentials, is artillery. Now, the point I want to have made clear and to find out about is whether or not the manufacturers in this country are manufacturing guns for our Navy when the need is greater in the Army. Do you know anything about that part of it?

Col. HOFFER. When war was declared, in accordance with the policy of the administration, as defined in the President's message to Congress, the procurement of war munitions in this country by our allies was not interfered with, and we found what we had known before, that to a great extent the gun-forging and the gun-machining capacity of this country was taken up with orders from our allies. It was necessary, therefore, to consider what further capacity existed, to what extent existing plants could be expanded, and then to consider new organizations that could be developed to take care of the immense quantity of gun forgings to be made and the immense work of machining those gun forgings into finished guns. The question of priority was settled by the Priority Committee of the National Defense, in conference with representatives of the Navy Bureau of Ordnance and the Army Bureau of Ordnance, and where the Navy Bureau of Ordnance and the Army Bureau of Ordnance could not agree then the Priority Committee settled in favor of one or the other. The result of that has been that each department now is working independently with such firms and are either utilizing their entire capacity, or in the case of firms which are manufacturing material for the Navy as well as for the Army confining ourselves to the exact part of their capacity that has been allotted to the Army. So there is not now and has not been for months any question of interference. For example, certain firms or organizations which were considered to be organizations for handling this work were allotted to the Army and certain of them were allotted to the Navy, and each department has developed the particular plant in which it is interested. You

see, a plant could not be operated for the manufacture of guns for the Army and also for the manufacture of guns for the Navy, because the guns are so dissimilar that it would require a complete change of equipment, such as tools, gauges, etc., and so much of this equipment would have to be changed that it would take months to accomplish it. Therefore the separation must come at the beginning.

Mr. McKENZIE. Right on that point, they could utilize men in your department who are now manufacturing guns for the Army. That is, men who are now being used in those factories for the manufacture of guns for the Navy could be used for the manufacture of guns for the Army, and, as I understand it, you are short of men of that character. While I do not want you to understand that I am prejudiced against the Navy—because I fully appreciate the importance of the Navy—yet I do feel, and I can not help but feel that this is a war that must be won, if won at all, by the Army; and it seems to me that every ounce of power and force than can be thrown behind the Army ought to be thrown there, and that some of these other things could wait. What I would like to know is, whether or not we are expending some of our force in the manufacture of guns for fortifications or for the Navy that could be used at this time for the manufacture of guns to be used by the mobile army in France?

Col. HOFFER. The Navy has had priority with reference to such guns—for example, the guns required to arm merchantmen and also with regard to certain guns for destroyers and certain machinery connected with destroyers.

Mr. GREENE. The idea being that until the Navy could make the seas safe there would be no army sent there at all.

Mr. McKENZIE. But why should they make 14 and 16 inch guns for battleships that they may not have use for in two or three years?

Col. HOFFER. The question of priority has been very definitely settled, and I think every point has been covered except just one point of labor.

Mr. DAVIDSON. Is there any competition between the Army and the Navy in the employment of labor, so as to make laborers more inclined to go to one line of production than to the other?

Col. HOFFER. I do not think that competition is at all serious. In starting an organization along this line of work, you consider, among other things, the labor. You consider the labor as well as other conditions at those plants.

It is not likely that there will be any serious interference on that account. The only interference that has come to my attention has been in cases where plants in undertaking this work wanted to get from some of the older plants some of their best men, and we thought that was not a bad idea, because the organization that could be diluted is the old organization and the organization that needs trained men is the new organization. While that is checked, it can not be said to be absolutely under control, and I do not know of any control over the labor situation with regard to any class of material.

Mr. McKENZIE. It would seem to me that this is no time for rivalry as between the two branches of the national defense, and it seems to me the organization ought to be so perfected as to drive at the point that is, perhaps, the weakest, or the point that needs the greatest assistance, and it seems to me that at this time that is the Army.

Mr. KAHN. As I understand it, this proportion was arrived at by a board which was duly organized to consider the matter, and after having considered it they decided that so much should be done for the Navy and so much for the Army, and that you are acting in accord with that.

Col. HOFFER. Yes, sir; both with regard to the older plants and with regard to the new plants that are turned over in their entirety to either the Army or the Navy. All questions with regard to war material must pass through and be cleared by the Priority Committee of the Council of National Defense, which consists of officers of the Army and Navy, as well as of civilians.

Mr. KAHN. Of course, there is such a contingency possible as the German fleet coming out of the Kiel Canal and getting beyond the British fleet and coming over to this side of the Atlantic. Such a contingency might happen.

Mr. CALDWELL. In the beginning of the development of our air forces there was a great deal of trouble experienced in finding firms capable of making the necessary equipment. Have you had the same kind of trouble in finding firms capable of making ordnance?

Col. HOFFER. Yes, sir; particularly with reference to gun forgings and gun machining. It was an art known to very few manufacturers.

Mr. CALDWELL. Has that been eliminated now, and have you gotten to the stage where you are making what your plans require?

Col. HOFFER. Our plans are progressing satisfactorily, and we have no reason for anticipating any unusual difficulties. Of course, difficulties are going to arise because there are complications about coal, there are complications about labor, and there are complications about raw materials with regard to every industry in the country, and they must be met.

Mr. CALDWELL. What I had in mind was this: When we first began thinking about the air service we were met with the proposition that the country could not make it; that the art was not developed in this country so we could make it. Have you got that condition in the Ordnance Department?

Col. HOFFER. Yes; we are struggling with it every day with regard to every class of material.

Mr. CALDWELL. What is the particular big thing in front of you which you are struggling with which the art of America has not developed to take care of?

Col. HOFFER. We think we have practically overcome the difficulty with regard to gun forging and gun machining. We are having difficulty now with reference to smokeless powder and explosives. The capacity of the country is not equal to the task which is being laid upon it, and one of the greatest sources of trouble is the scarcity of raw material.

Mr. CALDWELL. What particular raw materials?

Col. HOFFER. There is the question of toluol for trinitrotoluol. Then there is the question of ammonia for ammonia nitrate, and then there is the question of sufficient nitric and sulphuric acids. The matter of the acids is very serious. There is not plant equipment in this country able to take care of half of our needs, but we are developing as rapidly as we can, and just as in the case of gun forging and

gun machining we had to take 12 or 15 entirely new organizations, some of which had never seen a gun forging and never known anything about the building of a gun, and provide them with the plant equipment and undertake the task of instructing them.

Mr. CALDWELL. Are you doing that with reference to the other things you are short on?

Col. HOFFER. We are endeavoring to do so; yes.

Mr. OLNEY. Colonel, does not the United States even now depend upon the French manufacturers almost entirely for their heavy guns, and to what extent is this country going into the manufacture of guns, and of what caliber?

Col. HOFFER. We are looking to this country to eventually furnish our entire supply, but until this country is able to provide the troops abroad with the guns and the ammunition that they require we are relying upon our allies to furnish that which is required, and we are replacing it in the form of the raw material or the components.

Mr. GREENE. The 75's are largely built by the French and turned over to us now.

Col. HOFFER. They are furnishing us the 75's necessary for the troops that are over there until we can get the manufacturers in this country started.

Mr. TILSON. We are manufacturing or preparing to manufacture the ammunition for the 75's right in this country?

Col. HOFFER. Oh, yes. We have 75 ammunition under manufacture, and we also have 75-millimeter guns and carriages under manufacture.

Mr. OLNEY. You are manufacturing heavy guns here?

Col. HOFFER. We are manufacturing all mobile artillery from 75-millimeter up to 9½-inch.

Mr. TILSON. But are we manufacturing the 75-millimeter gun in this country? The French have been very particular about their gun.

Col. HOFFER. I am hesitating about the use of the word "manufacture." We started months ago to provide plans.

Mr. TILSON. To manufacture the 75-millimeter gun?

Col. HOFFER. To manufacture forgings and to manufacture all mobile artillery cannon from the 75-millimeter up to and including the 9½-inch.

Mr. TILSON. But the 75-millimeter gun is not our 3-inch gun. It is a slightly different gun, of course.

Col. HOFFER. Yes.

Mr. TILSON. My idea was not whether we are manufacturing guns of that general type, but whether we are manufacturing the actual 75-millimeter French gun in this country.

Col. HOFFER. No; we are not. I misunderstood your question, Mr. Tilson. We are manufacturing our own gun and carriage, but bored and chambered for the 75-millimeter ammunition.

Mr. GREENE. That is a temporary makeshift, because we have not abandoned the 3-inch gun, have we?

Col. HOFFER. It will be permanent, because there is no reason why we should ever go back to it.

Mr. CALDWELL. When you do that you are going to have one kind of ammunition for the Army and another kind of ammunition for the Navy.

Col. HOFFER. The ammunition of the Army and the Navy has never been interchangeable.

Mr. KAHN. From your former statement about the scarcity of these things which you now need, you are just beginning to realize how utterly unprepared for war this country is?

Col. HOFFER. We have realized it for some time, sir.

Mr. KAHN. The Army has, but some of the committee have not.

Col. HOFFER. But I may say in regard to some of these things that it was not anticipated—and we had very good reason for so thinking—that the allies would make the demands upon this country that they are now making. We had every reason for believing that capacity along these very critical points would be free to us about this time, and now there is no prospect of its ever being free.

Mr. SHALLENBERGER. Do I understand you to say that our artillery troops in France are using the French gun and not our 3-inch gun?

Col. HOFFER. They are being armed with the French gun.

Mr. SHALLENBERGER. Why have you abandoned our gun? Have you decided that the French gun is a better gun than our own gun?

Col. HOFFER. We think our 3-inch gun and carriage is as good as there is in the world.

Mr. SHALLENBERGER. Why do you not use it?

Col. HOFFER. We could not provide it in time.

Mr. SHALLENBERGER. You could provide it as fast as you could provide the French. You have a great many of them here. Have you not taken any of our guns over there?

Col. HOFFER. No, sir.

Mr. SHALLENBERGER. Why not?

Col. HOFFER. Simply because there was not a sufficient number to take care of the troops.

Mr. SHALLENBERGER. Have you bought more French guns than we have got guns manufactured now of the 3-inch size.

Col. HOFFER. Yes, sir; practically.

Mr. KAHN. Colonel, how long does it take to make a 3-inch gun?

Col. HOFFER. It takes, from the time you start the forgings, about five or six months.

Mr. KAHN. And when you were asking for a large appropriation to make guns in time of peace some of us had that in mind.

Mr. SHALLENBERGER. Can you make the French gun faster than you can make our gun?

Col. HOFFER. As I explained to Mr. Tilson, we are not making the French gun.

Mr. SHALLENBERGER. But you are going to make one like it?

Col. HOFFER. We are taking our gun and chambering and boring it so it will fire the French ammunition, and also making some change in the breech mechanism.

Mr. TILSON. Do I understand you anticipate that that is going to be permanent and that hereafter our 3-inch guns will be chambered for the 75-millimeter ammunition?

Col. HOFFER. Yes, sir.

Mr. TILSON. So that it will be interchangeable with the ammunition which the French use in their seventy-fives?

Col. HOFFER. Yes, sir.

Mr. TILSON. And then it will be our permanent policy in regard to our 3-inch guns? We are going on making our 3-inch guns, but

we are going to use in them hereafter slightly different calibered ammunition which is used by the 75-millimeter guns?

Col. HOFFER. Yes, sir.

Mr. GREENE. Is it not true, Colonel, that even to-day in our 3-inch guns we have not enough to supply the troops now in training in this country?

Col. HOFFER. Yes, sir.

Mr. SHALLENBERGER. What is the use of simply changing the character of your ammunition? Is it not a fact that you expect to make a gun which is in every detail the French gun, because you found the French gun is a better gun than our gun?

Col. HOFFER. No, sir; we do not think the French gun is better.

Mr. SHALLENBERGER. You only found the French ammunition better than our ammunition?

Col. HOFFER. The French ammunition has some points of superiority over our own ammunition. We could have applied the French ammunition to our 3-inch guns just as well, because there is just a slight change, and the only change is in the projectile, a slight increase in diameter, and a slight adjustment of the weight. The question arose as to how our troops could be best taken care of; first, whether they should fight with the English or fight with the French, and it was finally decided they would fight with the French. In order to have artillery and artillery ammunition for the troops that first went over there, it was necessary to rely upon our allies to supply those troops and keep them going until we could catch up with our manufacture here. That was the determining factor in changing.

Mr. TILSON. That is just what I was going to ask you. It saves us another transition from one ammunition to another. Now, we must make 75 millimeter ammunition in order to supply the guns that we must now use, and therefore it will prevent us from making another change if you go on making 75-millimeter ammunition and use it in our own guns. That will save us from changing once more.

Col. HOFFER. Yes, sir.

Mr. MCKENZIE. I would like to ask the Colonel a question in the interest, I might say, of fairness, in reference to the question asked by Mr. Kahn about the length of time it takes to manufacture a 3-inch gun. You replied from five to six months. Now, what are we to understand from that; that it takes from five to six months to get the first gun manufactured, or to manufacture each gun? In other words, if you started manufacturing 3-inch guns six months ago, how many could you turn out a day now, at the end of six months, with the facilities you have?

Col. HOFFER. A plant starting now, for example, ought to be turning out 75-millimeter guns, or 3-inch guns, up to about its capacity within six months. They could rush out one gun in less time than that. For example, one of these plants we have created for the manufacture of 155-millimeter guns has already completed a gun. They have gone through the operations, completed the gun, and completed the breech mechanism simply as a try-out of their general shop production.

Mr. CALDWELL. How many do you expect to produce a day when that plant gets to operating?

Col. HOFFER. I do not remember that.

Mr. CALDWELL. Have you any figures available or in your head as to about how many of these ordnance guns you are going to make in all the plants available now per day?

Col. HOFFER. We expect to complete by the summer of 1919, 16,000 guns of these various calibers.

Mr. KAHN. All told?

Col. HOFFER. Yes, sir.

Mr. KAHN. Could you tell us how many a day would be turned out by all the plants subsequent to that time? You say 16,000 in six months from now?

Mr. CALDWELL. No; in 18 months from now. Let me ask you just one more question. While we are making in these plants for ourselves 16,000 guns between now and the time you spoke of, our allies are having a great many guns made here too, are they not?

Col. HOFFER. Comparatively a small number.

Mr. CALDWELL. They are making a great deal of ammunition here, are they not?

Col. HOFFER. Not any great quantity; no.

Mr. CALDWELL. You said a few moments ago you had expected all these plants would be available for our service and that you have now discovered that they are not. Those two statements do not seem to agree.

Col. HOFFER. I made the mistake of applying your term "ammunition" to the metallic parts, such as the shell, and not to the explosives. The serious thing is the explosives, and to some extent the shell, but only with regard to certain calibers.

Mr. CALDWELL. The allies are buying enormous quantities of explosives here; is that the idea?

Col. HOFFER. Yes.

Mr. CALDWELL. So that as the war goes on, and the allies get out and we go in, we are going to have as much in the future as we have now?

Col. HOFFER. The trouble is they are not getting out as we expected. That is the primary cause of our trouble.

Mr. CALDWELL. You did not understand my suggestion of "getting out."

Mr. SHALLENBERGER. I would like to ask one more question about this artillery. Do I understand you to say that we have not sent any of our 3-inch guns to Europe; that our troops over there are all equipped with the French guns?

Col. HOFFER. Yes, sir.

Mr. SHALLENBERGER. That means we are being furnished a great many guns. How does that compare with Mr. Kahn's statement that we were informed by the office of the general staff of the French Army that we must not expect to be supplied with any essential of war, when artillery is the most essential part of modern warfare, and we are able to secure all these cannon from the French people when we were told that we must not expect anything from them? If our cannon are as good as the French cannon, and they are so short of everything, how is it we are still buying cannon of them?

Col. HOFFER. We are only buying up to the point where we can supply our troops with guns from here.

Mr. SHALLENBERGER. Where are all the 3-inch cannon we have made and paid for if they are just as good as the French cannon?

Col. HOFFER. They are all in the training camps, where they are imperatively needed, and where there is a shortage now for training.

Mr. TILSON. Are there not some training camps in this country now that are training men with pine logs?

Col. HOFFER. Yes.

Mr. TILSON. I have some photographs which show where they are actually training men with pine logs because they can not get the guns to train them with.

Mr. SHALLENBERGER. Has it been discovered by any other nation fighting over there that they have had to abandon their own ammunition and their own cannon as we have had to do? Did the English have to abandon their artillery supplies, or the French or the Belgians or the Italians? Have they not all adhered to their type or ordnance?

Col. HOFFER. Yes, sir; but they are working under the difficulty of each one of them being absolutely forced to maintain its own base. Their lines are just as separated as anything could be.

Mr. KAHN. Was not that the great trouble at the beginning of this war? Did not all the allied nations find themselves absolutely short of the quantity of ammunition that they required to serve their various field pieces?

Col. HOFFER. Yes; even Germany was short at the beginning.

Mr. GREENE. But Germany had the advantage of drawing from one standardized supply all the time for herself, whereas her allies were split up into as many different sources of supply.

Mr. SHALLENBERGER. Then the reason we had to change was not because you discovered our ordnance was inferior to that of our allies?

Col. HOFFER. No; not by any means, but as a matter of military expediency.

Mr. HARRISON. Colonel, how do you expect to arm this army of a million and a half with these big guns? Where do you expect to get the big guns? You have not got them here and you say the French can not supply them. Where are you going to get the big guns for this army?

Col. HOFFER. We had under manufacture in this country some large guns of the English type; and, again, for some of those larger calibers we are relying upon our allies to supply the guns until we can make them.

Mr. HARRISON. You are going to have an army, as I understand it, of 1,500,000 or 2,000,000 men in France. Have you got a plan made out by which you are going to supply them with these big guns necessary for their use, and where are you going to get them, and have we got the plants in this country to manufacture them?

Col. HOFFER. Yes, sir; the plants are being created and all our plans made to furnish all the cannon we need for the Army.

Mr. HARRISON. I understand that is contemplated for 18 months from now.

Col. HOFFER. That would be the artillery for 2,000,000 men with all their reserves.

Mr. HARRISON. What are you going to do for the next summer?

Col. HOFFER. Our guns and carriages and equipment will be coming in in the spring. Some of our 75-millimeter guns are slated for delivery commencing in January.

Mr. GREENE. That is right in line with the question asked a while ago. After you have once laid down the plan at the plant for the making of any type of ordnance, you figure a certain base period in which one gun is being completed, machinery, system, and everything else desired, and then you get in gear for it, and from that time there are successive periods of maturity for the various pieces of ordnance. Is not that right?

Col. HOFFER. Yes.

Mr. GREENE. So that from that time, after that base period has been determined, you begin to get an average of daily output?

Col. HOFFER. Yes; just like any other manufacturing industry. You gradually build up to your capacity, and then when you build up your capacity it will come along at that regular per day without any interruption.

Mr. GREENE. Then, on that basis you probably have approximated a base period of preparation for the first gun of the different types of ordnance?

Col. HOFFER. Yes.

Mr. GREENE. Do those figures and your experience justify you in the conclusion that there will be a considerable product of different types before the expiration of these 18 months?

Col. HOFFER. Oh, yes; our plan contemplates the completion of the project in that time.

Mr. GREENE. In the meantime there will have been delivered a great many pieces of ordnance of the various types, but you probably will not have arrived at full-production capacity until that time?

Col. HOFFER. Oh, we will arrive at full-capacity production before that time.

The CHAIRMAN. The next item is, "The Chief of Ordnance of the United States Army is authorized to employ in the District of Columbia, out of the appropriations made in this act for designing, procuring, caring for, and supplying ordnance and ordnance stores to the Army, such services, other than clerical, as are necessary for carrying out these purposes."

Gen. BABBITT. We wish to carry that on during the coming year. As it appeared in previous legislation it affected only the appropriation bill of which it was a part, and it is therefore necessary to repeat it. It is not general legislation. It applies to special cases when we want expert service. I can illustrate it by citing one case: We wanted to secure the assistance of a chemist from one of the colleges who was an expert on the chemistry of explosives, but we had no means prior to the passage of this act for utilizing his services, unless we could get him in as a commissioned officer, and we could not do that. We want, in addition to that, to get men in an advisory capacity in certain other lines. We have, for example, a man who is an expert in procuring machinery who is employed here only three days in the week. We have another man who is employed as an expert on keeping records, graphic charts, etc. He also is employed only for a few days per month. Some of these assistants have been put on the temporary roll as regular employees, but the expensive men are taken in as experts. These men are occupying positions other than clerical, and during the period of the war they are very necessary to our records in order that we may follow our production and keep track of it. As you can see,

we need to draw into our force men who are experts already, because we can not take the time to train anyone at this time.

Mr. TILSON. Have you stated about the amount that you would wish us to appropriate for this purpose, or which would be used out of this appropriation for this particular purpose?

Gen. BABBITT. I have not, but I can put that in the record.

The CHAIRMAN. Will you put in the record a statement showing about what amount you expect to expend for this purpose?

Gen. BABBITT. The accumulation of a force of employees of the class contemplated under this authorization is necessarily a slow process. It is estimated that for the current fiscal year the expenditures under this authorization will amount to approximately \$400,000; for the coming fiscal year this expenditure will be considerably larger—probably \$650,000, or more.

The CHAIRMAN. The next item is—

The appropriations made in this act shall be available for the payment of obligations on account of the existing emergency incurred prior to the passage of this act and which are properly chargeable to such appropriation.

Gen. BABBITT. You will remember that at the beginning of the war the Secretary of War authorized the Ordnance Department to incur deficits in some of our appropriations. I think the amount authorized was \$43,000,000. This legislation permitted us to charge this deficiency to the appropriations then being made. It might occur, for example, that in our 1918 appropriations we might not have funds enough, and would want the Secretary of War to authorize us to incur deficits to be paid for out of this fund.

Mr. TILSON. Should not that language be changed from "incurred prior to the passage of this act" to this language: "Incurred prior to July 1, 1918"? Would not that cover it? This act may pass in April; and, if so, what about contracts that might be made between April and the 30th of June?

Mr. CALDWELL. That would not make any difference.

Gen. BABBITT. We are not troubled very much with that, because when an act is passed the contracts that are made in the last days of the fiscal year hardly mature until the 1st of July.

The CHAIRMAN. The deliveries are made after?

Gen. BABBITT. Yes, sir.

Mr. TILSON. Do you think this will take care of it if it is left this way, "incurred prior to the passage of this act"?

Gen. BABBITT. Yes, sir.

The CHAIRMAN. The next proviso has been carried since the appropriation act of August 29, 1916.

Gen. BABBITT. There is nothing special about that. It occurs every year.

The CHAIRMAN. It has been carried since the act of August 29, 1916.

Gen. BABBITT. We are required to put that in the estimates. The prior act requires that that shall appear in the estimates.

(At 1 o'clock the committee adjourned until Wednesday, December 12, 1917, at 10 o'clock a. m.)

HOUSE OF REPRESENTATIVES,
COMMITTEE ON MILITARY AFFAIRS,
Wednesday, December 12, 1917.

The committee met at 10.30 o'clock a. m., Hon. S. Hubert Dent, jr. (chairman), presiding.

**STATEMENT OF BRIG. GEN. E. B. BABBITT, OF THE ORDNANCE
DEPARTMENT—Resumed.**

Gen. BABBITT. Mr. Chairman, there is one matter to which I might refer, which was brought out in a question asked by Judge Wise on Monday regarding the amount of material that had actually been procured under the appropriation "Ordnance stores and supplies." I answered in a general way that we keep a running chart showing how that was done, and that I thought I might bring one or more of those charts to the committee if it met with the committee's approval. There are so many, however—some 7,000 completed articles and some 25,000 altogether, counting the components—which we have to list that a statement in tabular form would be a very difficult and a very laborious one to prepare, and I think would hardly be one that the committee would have time to look over. It also should be considered confidential, in that the progress we are making would necessarily be a direct index of how nearly prepared we are. I would suggest, therefore, if it meets the committee's approval, that I make the general statement that the project, so far as the personal equipment of the soldier is concerned, will be completed in April for a force of 2,300,000 men, with the exception of a small amount of leather equipment, for which the manufacturing facilities of the country are at present insufficient to produce at the rate we desire.

The CHAIRMAN. I think that is a sufficient answer.

The next item is, on page 71, "Rifle ranges for civilian instruction."

Gen. BABBITT. For the current fiscal year the department submitted an estimate for this purpose in the sum of \$500,000, and in the act of May 12 \$300,000 was appropriated, so far, at least, as this appropriation affects the Ordnance Department. The item affecting the Ordnance Department appears on page 72, as you will note, and the remainder of that appropriation relates to the Quartermaster Department, for labor to the extent of \$20,000. This estimate is based on a statement furnished us by Maj. Bookmiller, a retired major of infantry, who has been detailed to take charge of the civilian rifle practice in this country. It covers the procurement of material for target practice, such as target carriers, disks, flags, targets of various kinds, gallery practice targets, etc., amounting to \$3,085 for one club, exclusive of the ammunition. Maj. Bookmiller estimated there would be 1,000 clubs, a number larger than the department considered would be practicable at this time under war conditions. We therefore took half that number upon which to base

our estimate, namely 500 clubs, which gave us a total for equipment of \$1,542,500 and for ammunition \$157,500, making the total which appears in the estimate for the Ordnance Department of \$1,700,000.

The CHAIRMAN. Is this practice really being carried on now?

Gen. BABBITT. I should say it was to the extent that we have been thus far able to furnish the supplies and more particularly the ammunition. Due to the general shortage of ammunition, I believe we have confined our issue largely to the National Guard and to the National Army. Col. Thompson verifies that. He has charge of the small-arms ammunition question. For the time being, the rifle clubs will probably have to mark time until we catch up with the supply.

Mr. TILSON. Who in general are being trained in these rifle clubs; I mean what class of men, as to age, and so on?

Gen. BABBITT. In my limited experience of this subject I should say that relatively few of these men are within the draft age or men who would be called to the colors.

Mr. TILSON. Does it seem to you that at this time, when we are bending every effort toward securing supplies for strictly military uses, we should continue the use of ammunition and money for these things which, while good in themselves in ordinary times, yet are not absolutely essential at this time?

Gen. BABBITT. Personally, I would consider it unnecessary.

Mr. TILSON. I am very much in favor of it in ordinary times.

Gen. BABBITT. Yes.

Mr. TILSON. Because I think that sort of thing ought to be encouraged among our citizens, but the question is whether it is now a matter of pressing necessity.

Gen. BABBITT. I do not consider it a matter of present necessity, Col. Tilson. I think I might add that it will solve itself in that the department will not supply the material until the situation is such that it can be supplied without detriment to the military service.

Mr. DAVIDSON. I suppose to the extent that the supply would permit, there might be old arms which could be supplied for such rifle practice?

Gen. BABBITT. Yes; that has been our practice. We have issued Krag rifles to these clubs, with the exception of one modern rifle, I think, to every 10 men in a club. They have used the Krag rifle and the Krag ammunition. Both the arms and the ammunition of the Krag type have been issued now to the National Army for drill purposes, although they are rapidly being withdrawn, and, as I recall, the chart of production indicates that we will have modern rifles by the end of this month for all our men.

Mr. TILSON. Do you not think it might perhaps be more useful and more nearly essential to put these Krag rifles in the hands of the home guard which may at any time be called upon to do actual service in case of need at home after the troops have been sent away?

Gen. BABBITT. I think that is very desirable, Col. Tilson, and that is contemplated.

The CHAIRMAN. The next item is on page 73, for arms and ordnance equipment in connection with training camps for civilians. This comes under your department, does it not?

Gen. BABBITT. Yes, sir; civilian training camps. That portion which pertains to the Ordnance Department is found on page 73, at the bottom of the item, \$2,640,000.

Mr. TILSON. To what class of camps does that apply?

Gen. BABBITT. That is an item of questionable need. It refers to the civilian camps which have been going on during the summer, like the Plattsburg camp, for example, and the others. With the cessation of that form of training, the appropriation would be unnecessary.

Mr. TILSON. It seemed to me it was rather a stretch of the term to call those civilian training camps—the ones that went on this summer—where they were actually prepared for service as officers. Heretofore the camp at Plattsburg has been purely a civilian camp, but it seems to me the training camps this year were of quite a different character.

Mr. MCKENZIE. They were officers' training camps.

Mr. TILSON. They were officers' training camps; and it seems to me the expenditure there was absolutely justified by the war.

Gen. BABBITT. Yes.

Mr. MCKENZIE. That is a different proposition from this.

Gen. BABBITT. This is intended to continue the Plattsburg project. Whether it will be continued now, in view of the war, is something I do not know. That would be a question of policy in the War Department of which I have no knowledge.

Mr. TILSON. There will undoubtedly be training camps of some kind or other, whether at Plattsburg or at the various cantonments or somewhere else, but there will undoubtedly be training schools of some sort for officers.

The CHAIRMAN. But not what are known as civilian training camps.

Mr. TILSON. It does not seem to me the camp at Plattsburg last year could be called a civilian training camp, in any sense of the word.

Gen. BABBITT. They were civilians, of course. They were trained and then selected and commissioned, in contradistinction to what you will find at all our cantonments when the men called under the draft are inducted into the service and then sent there for training. They are properly paid out of the Army appropriation.

Mr. TILSON. It seems to me all that would be necessary would be to drop out the word "civilian."

The CHAIRMAN. What is the use of the appropriation at all?

Mr. TILSON. If they need a special fund for carrying on these camps, all right. If it can come out of some other funds, then all right.

The CHAIRMAN. You do not understand, General, do you, that the officers' training camps which were held throughout the country were paid for out of this appropriation?

Gen. BABBITT. I should say they would be paid for out of this appropriation, Mr. Chairman. I would have to look into that more carefully, because that particular feature has not been brought to my attention. It is a question of furnishing the supplies so far as the Ordnance Department is concerned. The other appropriations we have had have been applicable solely to men within the military service.

Mr. TILSON. Let me ask you this question, General: Suppose you take to-day 1,000 men out of a cantonment and take them out some-

where on the side and put them into a camp and train them, as you, probably will have to do in order to get officers, what appropriation in the bill would you pay it out of if it was done in that way?

Gen. BABBITT. It would be paid from the regular Army appropriation as a part of the Army.

Mr. HARRISON. Some of those men are from colleges and they are really civilians.

Mr. TILSON. That has been so in the past.

Mr. HARRISON. I mean, as to the January camps. There will be many of them from the colleges.

Mr. TILSON. Yes; that is correct.

Gen. BABBITT. Those are civilians.

Mr. TILSON. And they will be mixed in with the other men from the ranks.

Gen. BABBITT. Yes, sir; some of the expenditures under that heading will therefore be paid from this appropriation, as I understand it.

Mr. McKENZIE. I do not know what the policy of the department is going to be hereafter, but it seems to me it would be the part of wisdom to confine the training of men from the service hereafter; and if a man wants to get training let him enlist or get into the Army.

Gen. BABBITT. We expect to do that almost exclusively, Mr. McKenzie, as far as the Ordnance Department is concerned. We are declining, except in the case of special technically trained men, to take men into the Officers' Reserve directly from civil life. We are telling them the gate is open through enlistment, and we are now preparing to promote some of the best enlisted men.

Mr. McKENZIE. Noncommissioned officers?

Gen. BABBITT. Yes, sir; that is the proper gateway for them to take to enter the service with a commission.

Mr. McKENZIE. To my mind it seems a little unfair, although there are some good men getting into the service in that way and heretofore we have had to take them from civil life because I know I have been importuned a great deal to help get young men into the training camps, and I presume every other Member of Congress has been importuned, but I should think it would save confusion at least to simply have it the policy of the War Department hereafter to make the selections from the body of one or two million men who are wearing the uniform of the United States Army.

Mr. TILSON. Have they not done that already, Mr. McKenzie, except from certain schools which have military instruction, and in those cases the man must come recommended by the Army officer who gives the instruction at that school, as I understand it.

Mr. McKENZIE. I understand that.

Mr. TILSON. So it is limited to men already in the service.

The CHAIRMAN. You mean the next camp is limited in that way?

Mr. TILSON. Yes.

The CHAIRMAN. Heretofore the camps have not been limited in that way.

Mr. HULL. Is not the whole conflict here over the use of the word "civilian"? After we have entered the war we are simply using the same word we used in the last year's appropriation bill.

Gen. BABBITT. It would, however, apply to the civilian still to the extent that he has not been inducted into the service in some cases. These men who are graduates of military institutions, who have not been commissioned, and who go to these training camps, must be provided with equipment and taken care of while there.

Mr. HULL. They are a very small proportion of the training camps now.

Gen. BABBITT. I should think so.

Mr. HARRISON. There are 2,400 of them.

Mr. SHALLENBERGER. General, is it not a fact that among the thousands of officers whom you are going to have in your department as it expands and as the war goes on, and also in the Signal Corps and the other technical departments of the Army you are going to have to take thousands of men because of their technical knowledge, without any reference to their military training?

Gen. BABBITT. Yes, sir.

Mr. SHALLENBERGER. So that this idea that they must all come from the ranks is not practical because you will have to take in thousands who will not come from the ranks.

Gen. BABBITT. I modified my answer to that extent.

Mr. SHALLENBERGER. Yes; and in a general way it is true; but, on the other hand, we have got to realize that there are thousands of men who will have to be taken into these special and technical corps from civil life.

Gen. BABBITT. We will probably take more than any other corps because of the training which must be technical and which we can not get from the training camps.

Mr. SHALLENBERGER. Every place I turn I run onto majors, colonels, and captains who are men of years, and I am told upon inquiry that they were civilians when the war started. They must have been taken in because of their highly technical training and not because of any particular military training, and you can not get along without those men?

Gen. BABBITT. No; we can not.

Mr. SHALLENBERGER. And such men will have to be still taken in?

Gen. BABBITT. Yes, sir; that is quite right.

The CHAIRMAN. Gen. Babbitt, the next item is "Ordnance equipment for home-guard organizations, \$4,500,000," a new item.

Gen. BABBITT. This is a new item, Mr. Chairman. The department was prompted in making this estimate due to the demands which were pouring in upon it from the States after they had been denuded of their National Guard. This was especially true of manufacturing communities, where they appreciated the necessity for the protection of their great industries. We had nothing at that time with which to supply these Home Guard organizations. This estimate is rather small in amount; it contemplates procuring about 75,000 rifles and about 9,000,000 rounds of ammunition; canteens, haversacks, and cartridge belts to go with the rifles. This is not the complete equipment of a soldier but is simply enough to enable a Home Guards man to look after himself. He would need his canteen, and of course he would need his haversack and a cartridge belt and ammunition.

Mr. ANTHONY. General, how many Home Guard organizations have been organized over the country?

Gen. BABBITT. I do not know, but I will have that inserted in the record.

NOTE.—From reports thus far received it appears that there are at this time authorized home organizations totaling approximately 93,000 men; also unauthorized organizations totaling approximately 26,000 men.

Mr. ANTHONY. Are there any Home Guard companies in existence in any of the States?

Gen. BABBITT. Quite a large number. Massachusetts made a request, as I recall it, for 17,000 guns. This may have been increased since then.

Mr. ANTHONY. How would you arm and equip these men—the same as the Regular soldiers of the service?

Gen. BABBITT. No; we would give them only enough equipment to get them under way; for example, canteens, haversacks, and belts. We would not give them the packs, pack carriers, intrenching tools, etc.

Mr. ANTHONY. But you would give them the regular service rifle?

Gen. BABBITT. We would give them the service rifle and service ammunition; also a small allowance of ammunition for target practice.

Mr. ANTHONY. What have you done with the Krag rifles which you had in storage?

Gen. BABBITT. They were all issued to the National Army for training purposes. They are just as good for training a recruit; and indeed in some respects this is the better plan, in that we then give them, after they have been trained and the rifles pretty well knocked to pieces by awkwardness and abuse, a new rifle, following in that respect the German practice.

Mr. ANTHONY. Then they are now in use?

Gen. BABBITT. They are now in use, but will soon be withdrawn. By the end of this month they will probably all be back in storage.

Mr. TILSON. You have spoken of German service. Have they training rifles?

Gen. BABBITT. They have established the precedent of using an old rifle for training purposes, one that is obsolete.

Mr. ANTHONY. Can those rifles be supplied to the Home Guard organizations?

Gen. BABBITT. They will undoubtedly first have to be overhauled.

Mr. ANTHONY. They can be utilized for that purpose?

Gen. BABBITT. Yes; they will be.

Mr. McKENZIE. Take, for instance, our State of Illinois, where our legislature passed some legislation last winter providing for the organization of a number of regiments as provisional National Guard or State troops. I do not know under what appropriation they would be taken care of.

Gen. BABBITT. This would be for that purpose. You have important industries, and if there should be a riot there, the only way it could be stopped would be by the use of some such organization, or else by Federal troops.

Mr. McKENZIE. We have three full regiments and a number of other provisional regiments.

Mr. TILSON. We have in the State of Connecticut more home guards than we had National Guard when this war began, and we realize the necessity of having them there.

Mr. DAVIDSON. In my State they are organizing right around all the cities where they had National Guard companies home-guard organizations.

Mr. HULL. There are several such organizations in my State.

Gen. BABBITT. I think this is a very moderate amount, and it will provide a class of material which, if it is not called for by the home-guard organizations can be utilized in the Regular service. It is all modern material.

The CHAIRMAN. I was just wondering how you arrived at the amount of 75,000 rifles.

Gen. BABBITT. That was simply based upon the data we had in September, and I think if I were to look it up now it would probably be more than that.

The CHAIRMAN. They were the requests you had had up to that time?

Gen. BABBITT. Yes, sir.

The CHAIRMAN. The next item is "Ordnance stores, equipment, etc., Reserve Officers' Training Corps."

Gen. BABBITT. Under the act of May 12, \$1,000,000 were appropriated for that purpose, and under the urgent deficiency act of June 15, \$524,000. The estimate is based upon equipping educational institutions that desired to qualify under the act of June 3, 1916, to maintain Reserve Officers' Training Corps. Training will go on in those institutions now, as well as in peace times. The institutions qualifying at present have about 27,677 students; the institutions which have made application, but have not quite qualified, but are entirely capable of doing so, have students amounting to something over 17,000 more; the institutions which are in a condition to qualify—at least have the qualifications if they care to apply—have students amounting to 15,000; a total of about 60,000 for which provision should be made, and this estimate, coupled with the appropriation for the present fiscal year, will provide for those 60,000 students.

Mr. DAVIDSON. Which item is that?

Gen. BABBITT. The item at the bottom of page 74.

Mr. MCKENZIE. The item for which \$1,000,000 was appropriated?

Gen. BABBITT. Yes, sir; and for which we are asking \$2,921,000.

Mr. HARRISON. Have you officers to put into those institutions for training purposes?

Gen. BABBITT. Officers are assigned by The Adjutant General for this work. The Ordnance Department does not do that. Many are retired officers who are able to handle that class of work, but who are not in sufficiently good physical condition to be brought to active service and sent out with troops. That class of officer, who has some physical disability, can be used for recruiting purposes and for training purposes.

Mr. HARRISON. The reason I asked the question, there are one or two institutions in my district which have never been able to get officers.

The CHAIRMAN. The department supplies some of the institutions with noncommissioned officers?

Gen. BABBITT. Yes, sir.

The CHAIRMAN. Why can not the department have the colleges qualify now who have made application?

Gen. BABBITT. The department is unable to equip them. If we did not have stores on hand and the colleges applied—they are entitled to them under the law—we would be unable to equip them and they would run through the year without the equipment. One of the difficulties that the educational institutions labor under is a falling off in enthusiasm. Everybody gets ready; we have had every year a number of such cases; at first there is tremendous enthusiasm and they must have the guns and ammunition almost immediately, and if we can not comply at once, within six months all enthusiasm is gone. I think it is a form of enthusiasm that is well worth cultivating.

Mr. TILSON. All of the equipment which you furnish in this way is standard and necessary equipment for use in the field so that it will not be lost?

Gen. BABBITT. No; not a bit will be lost. If we have it on hand and it is not called for, our subsequent estimate would be reduced by that amount, because every year we take into account what supplies we have on hand.

The CHAIRMAN. How many colleges have these 27,000 students?

Gen. BABBITT. I have not that information. I will be glad to get it and put it in the hearing, if you will permit me.

The CHAIRMAN. I would be glad if you would show the number of institutions, practically in the service, the number which have applied, and the number which have qualified and have not applied.

Gen. BABBITT. The number of institutions having enrolled qualifying reserve officers' training corps is 92, with a total of 27,677 students; the number of institutions having military training that made application but had not qualified June 1, 1917, is 35, with approximately 17,000 students; the number of institutions not having military training who have applied but had not qualified on June 1, is 63, with approximately 16,000 students. The number of enrolled students has undoubtedly largely increased since June 1, and the estimate of probable needs under this appropriation is a very conservative one.

The CHAIRMAN. The next item is on the same line, on page 75, "Ordnance supplies for military equipment of schools and colleges."

Mr. DAVIDSON. I have not yet been able to distinguish the difference between the former item which we were discussing and this one.

Mr. SHALLENBERGER. I think the reason for the large amount there is that it includes the transportation of horses and forage which we found was very expensive.

Gen. BABBITT. The Quartermaster General gets a part of that.

Mr. SHALLENBERGER. And the other part is for arms and equipment?

Gen. BABBITT. Yes, sir. In the act of June 3 provision was made for furnishing military equipment for instruction at schools and colleges. We provide equipment at schools and colleges that do not maintain organizations designated in the act as reserve officers' train-

ing corps. The act of June 3 provides "such arms, tentage, and equipment as the Secretary of War shall deem necessary for proper military training shall be supplied by the Government to schools and colleges, other than those provided for in section 47 of this act, having a course of military training," etc.

Mr. TILSON. Does that refer to the State agricultural colleges who are receiving appropriations from the Government and are required to have military training of some sort?

Gen. BABBITT. They are provided under an old act and we still provide them under that act.

Mr. QUINN. Under that act have you any record of how many schools took advantage of this military training?

Gen. BABBITT. I have not it with me, but we have a record of every school that we have supplied. Normally, I bring that record with me, but this year in making up my notes with the assistance of the clerks—I had none of the old clerks and my notes are not as good as they should be. Last year I had the number of colleges and schools all amongst my notes. My time has been so limited that I have not been able to give the close attention I should like to some of those details.

With reference to the item on page 75, "Ordnance Supplies for Military Equipment of Schools and Colleges," the estimate of the department for the present fiscal year, covered equipment for 50,000 boys and amounted to \$718,000. Under the act of May 12, \$500,000 were appropriated. Between the date of that estimate and the time when we could make any application of those funds, the price of everything had advanced so that we now find we can provide with the money appropriated about 30,000 students, that is with the \$500,000 which have already been appropriated and are being expended this year. The total number of students in the State universities and colleges in the United States amounts to something over 90,000, other colleges to about 60,000, public high schools to 660,000, and private high schools to about 12,000, giving us 832,000 students who might be beneficiaries of this act.

Mr. SHALLENBERGER. They are male students?

Gen. BABBITT. Yes, sir. Of course, a number, about 70,000 are already engaged in military work, leaving approximately 775,000 students to be provided. Instead of taking the full number given there, we estimate that about 50,000 will apply, and therefore the amount asked for here is to cover that number of students.

The CHAIRMAN. Fifty thousand students?

Gen. BABBITT. Yes, sir; 50,000 students to be provided with personal and horse equipment, in addition to overhauling that which has already been provided.

Mr. CALDWELL. The 50,000 is more or less an arbitrary guess?

Gen. BABBITT. Yes, sir. At one time the conditions promised to flood us in the line of furnishing equipment and it may come to us again. In the State of Illinois they organized some sort of a high school military unit—I have forgotten what it was called—and I think in the schools in and around Chicago and northern Illinois they succeeded in forming an organization containing 50,000 students, and

called upon the Federal Government to furnish some form of instruction.

Mr. McKENZIE. That was under the national defense act which makes provisions for schools having 100 students or more.

Gen. BABBITT. They formed this organization even before that. I think the war has broken that up temporarily.

The CHAIRMAN. General, I think that closes all the items that I have a memorandum of.

Gen. BABBITT. Yes, sir.

The CHAIRMAN. We are much obliged to you, General.

**STATEMENT OF COL. JOHN T. THOMPSON, UNITED STATES ARMY,
RETIRED, IN CHARGE OF THE SMALL-ARMS DIVISION, ORD-
NANCE OFFICE, WAR DEPARTMENT.**

Col. THOMPSON. May I say, Mr. Chairman, that the Small Arms Division has to do with the design, manufacture, and repair of small arms, including rifles and pistols of small-arms ammunition, caliber .30 and .45, and of small-arms target supplies. The division has about 12 large plants in operation, about 70,000 employees, and over \$350,000,000 to spend before next June, if possible.

Mr. TILSON. Do you mean that is the amount to be spent in the Government plants or does that include the private plants from which you are purchasing?

Col. THOMPSON. That amount includes all plants devoted to these purposes.

Mr. TILSON. Whether Government or private?

Col. THOMPSON. Whether Government or private; yes.

The CHAIRMAN. The first item is "Ordnance stores, ammunition," for which you are asking \$390,000,000. Will you explain that item?

Col. THOMPSON. I would say, in general, Mr. Chairman, that the three appropriations with which this division is concerned are ordnance stores ammunition, small arms target practice, and the manufacture of arms. The ordnance stores ammunition and small-arms target practice appropriations are based upon an army of about 1,500,000 men. The manufacture of arms, as will be explained, is based upon a larger number, for reasons which will be given. The Small Arms Division is, however, not charged with the supply, as it is called, of these ordnance articles to troops. The determination of the requirements of troops, based on the amount of supplies of this character on hand and required, is made in the Supply Division of the Ordnance Department for all the other divisions, and we are given a table in the Small Arms Division stating those requirements.

This particular appropriation, ordnance stores ammunition, becomes in time of war, perhaps, a misnomer. It uses the words "reserve supply." It is not only for a reserve supply but it is for the battle supply. That is about the only difference as to the amount of ammunition of various kinds for small arms, as called for, or that will exist between the appropriations as called for in time of peace and in time of war.

Mr. TILSON. Do you not think the form of that item ought to be changed? If you look at it hastily you would think you are using \$90,000,000 to get ammunition to fire the morning and evening gun military posts and soldiers' homes.

Col. THOMPSON. Yes, sir. I think those precise definitions of appropriations come in sometimes from the fact that the department has had to do certain things and has been doing them for years, and has to get special authority for continuing to do them.

The CHAIRMAN. It has been carried that way for a long time?

Col. THOMPSON. Yes.

Mr. TILSON. But it looks ridiculous, if you do not look at it very closely.

The CHAIRMAN. It is deceiving.

Col. THOMPSON. May I state, in regard to all of these appropriations under the control of the Small Arms Division, that they are appropriations which can easily be multiplied for any other number of men, because they are based on so many rifles per man and so many cartridges of each kind per man.

Mr. ANTHONY. Will you state just what weapons would be embraced for small arms and hand use?

Col. THOMPSON. The service rifle, model of 1903, as made at the Springfield Armory and at the Rock Island Arsenal; the service rifle, model of 1917, as made at three outside manufacturing plants, both of which rifles are caliber .30 and fire the same cartridge; the automatic pistol, model of 1911, caliber .45; and the Colt and the Smith & Wesson revolvers, caliber .45, which now fire the same cartridge, caliber .45.

Mr. ANTHONY. Does that also cover ammunition for machine guns?

Col. THOMPSON. Yes; the appropriation, in addition to the ammunition for small arms, also covers the ammunition for machine guns, which are of caliber .30.

Mr. ANTHONY. And also hand grenades?

Col. THOMPSON. This appropriation also carries the reserve and battle supply for hand grenades, which subject is under Col. Hoffer.

Col. HOFFER. If I may, I would like to enumerate the items that will be included: Hand grenades; rifle grenades and drop bombs, the drop bombs covering the class of projectiles that are dropped from aeroplanes. Our estimates for the class of materials called for are submitted as a part of the Ordnance stores ammunition item which is now under consideration.

Mr. CALDWELL. You stated that you made this estimate on the basis of an army of approximately 1,500,000 men, and a part of it on an increased number of men. I understand from that that you have figures on an army of a million and a half men, that a certain portion of them would be Artillery, a certain portion of them Engineers, etc., not using small arms, and that you are only figuring for the number of men who would actually use the small arms in an army of a million and a half men?

Col. THOMPSON. Exactly so, sir; for the ammunition for the number of men carrying rifles and pistols; but for small arms, this estimate is based upon a larger number of men and for other requirements, such as those of the Navy, etc., as will be explained later.

Mr. CALDWELL. And machine guns?

Col. THOMPSON. Yes; for the number of machine-gun men as laid down in the organization tables, which are approved. Of course, these tables are subject to change from time to time, as is deemed best, according to the exigencies of the case.

Mr. ANTHONY. Is this for 1,500,000 men in the field and for field use?

Col. THOMPSON. For field use, yes, sir.

Mr. CALDWELL. What allowance do you make in your estimates for rifles, for pistols, and machine guns of the various types?

Col. THOMPSON. That exact subject is not under my present jurisdiction, and it is changing very rapidly. It is a matter with the supply division, which, as I said before, makes out the requirements and then sends to the Small Arms Division the total amount required. I might say, however, that that has been the subject of a great deal of consideration, and the experience has been different in the French Army and in the British Army; one army will base the number of cartridges per man per day on the total number of men in the entire theater of war, and with a certain amount of reserve for so many days, based upon experience; another army will base that estimate to the number of men to be maintained on the firing line. That information is now in the hands of the experts who make these calculations, and upon that information these tables have been made. That information can be gotten from the Supply Division.

Mr. CALDWELL. You have not that before you at all?

Col. THOMPSON. No, sir; I have it for small-arms target practice, because that is gotten at in another way.

Mr. CALDWELL. Do you know how much of this small arms will be treated as field reserve and how much will be treated as reserve in transportation and how much in reserve in the warehouses?

Col. THOMPSON. No, sir; that subject is not under my jurisdiction; it is under the jurisdiction of the Supply Division.

Mr. CALDWELL. Who is at the head of that division?

Col. THOMPSON. Col. Horney, who was here the other day. I believe that matter is a matter of such importance that it was deemed best to take it out of the hands of all the manufacturing divisions and put it into a special division that would have special charge of that work.

Mr. CALDWELL. The other day, when we first started our hearings, there were a number of questions asked of the officers who appeared before us along the line of how much would be required in the event that we had an Army of 3,000,000 men. I have wondered whether there has been any conference, of which you know, among the heads of the bureaus in the War Department, as to whether or not the appropriations of Congress should be continued on the basis of 1,500,000 men, or whether they should increase them?

Col. THOMPSON. That is a matter of which I would have no official knowledge; it would concern the policy of the department. When anything of that kind occurs we are simply told what to do.

The CHAIRMAN. That information would come from the Secretary or the Chief of Staff?

Col. THOMPSON. Yes, sir.

Mr. KAHN. Are you making the ammunition for the so-called Chauchat rifle?

Col. THOMPSON. Yes, sir. We are getting—confidentially, of course—the initial supply of French 8-millimeter cartridges in France for this purpose; we are getting a supply from the cartridge works at Swanton, Vt., and we are providing for an additional supply to be made at Upper Alton, Ill., and Kansas City.

Mr. KAHN. Those supplies would be in addition to those you indicated a little while ago as coming out of this appropriation?

Col. THOMPSON. No, sir; they would replace a part of this; and, in addition to the French cartridge, I might particularize by saying

that there have grown up quite a number of types of cartridges of which we have not much knowledge nor experience in this country.

Mr. ANTHONY. What is the 8-millimeter cartridge used for?

Col. THOMPSON. For the French rifle, the Chauchat gun, and French machine gun, which is known as the Hotchkiss.

Mr. CALDWELL. We are not using those in our Army, are we?

Col. THOMPSON. We are going to use, for the present, some of the French machine guns and also some of the French light machine guns, called the Chauchat.

Mr. ANTHONY. Do you consider them an improvement on the type of machine gun in this country or guns that you can easily get over there?

Col. THOMPSON. I understand it is simply a question of immediate procurement.

Mr. CALDWELL. Would you not have that unfortunate thing of two kinds of cartridges in the same division?

Col. THOMPSON. Temporarily; yes, sir.

Mr. KAHN. As I understand it, Colonel, the Chauchat French gun which you purpose using is practically a hand machine gun handled by one man?

Col. THOMPSON. Yes, sir.

Mr. KAHN. Instead of two or three soldiers working a machine gun, this is worked by one man, who holds it by his side?

Col. THOMPSON. Yes.

Mr. KAHN. He has a metal socket that he puts it into, and he just swings it around as he fires?

The CHAIRMAN. As he would a hose?

Col. THOMPSON. Yes.

Mr. CALDWELL. You can use the Lewis gun in the same way?

Mr. KAHN. No.

Col. THOMPSON. It is a somewhat lighter gun than the Lewis gun.

Mr. ANTHONY. It is a further development along the same line.

Col. THOMPSON. Yes, sir.

Mr. SHALLENBERGER. It is not fired from the shoulder?

Col. THOMPSON. It is too heavy to be habitually fired from the shoulder by the average soldier.

Mr. SHALLENBERGER. The French have a gun—the Chauchat gun—that is fired from the shoulder.

Col. THOMPSON. Those rifles of the automatic type that are intended to be fired from the shoulder and to be carried by a single man should not weigh over 10½ or 11 pounds.

Mr. SHALLENBERGER. Are you using any of them?

Col. THOMPSON. No, sir. No country has ever successfully gotten that type, because when you get such light weights the parts begin to break.

Mr. SHALLENBERGER. The lightest gun that you have in contemplation is the French gun?

Col. THOMPSON. Yes, sir; that is the lightest.

NOTE.—I have since learned that the light Browning weighs less.

Mr. ANTHONY. Are all the men in the training camps now supplied with the service rifle?

Col. THOMPSON. I do not see any reason why they should not soon be; but, as I said before, I am not in charge of the Supply Division.

Mr. ANTHONY. As you know, there has been a good deal of newspaper talk about the men being compelled to drill with wooden guns.

Col. THOMPSON. Are you speaking of officers' training camps?

Mr. ANTHONY. No; I am speaking of cantonments.

Mr. KAHN. National Army camps?

Col. THOMPSON. No, sir; the situation there was that none of those rifles of the 1917 model, when we started out, would interchange, even in the same plants. They were all touched up or hand finished, and the consequence was that we had to standardize them. "Interchangeable" in that connection is a bad word. We had to standardize them. When we come to talk about standardizing liberty motors or standardizing ships, everybody understands it, but when we in discussing small arms talked about making them interchangeable, few knew exactly what was meant. We standardized those rifles so they would interchange to a certain degree in the different plants, so that if they ran short in one plant we could send to another plant.

Mr. GARRETT. I visited the camps in Texas during the vacation, and I found at nearly all of them that they had one gun to about four men. Now, as I understand you, that is due to this process of standardizing?

Col. THOMPSON. Yes, sir; but we got out 40,000 last week.

Mr. GARRETT. And that trouble has now passed away?

Col. THOMPSON. It has passed away to a great extent unless we have trouble in the matter of labor or material.

Mr. SHALLENBERGER. The troops are not yet supplied with the service rifle——

Col. THOMPSON (interposing). It takes some time to get them, and we are just getting the steam on. We have 160,000 Krag in the camps, I understand, and 220,421 of the 1917 model have been manufactured to date, which makes a total of 380,421 rifles. Now, if we take the 600,000 men of the National Army and multiply that number by 66 $\frac{2}{3}$ per cent, which is the percentage of men armed with the rifle, we get 400,000 men that ought to have rifles. Deducting 380,421 Krag and 1917 rifles from that number, we have a shortage of 19,579. In one week we ought to fix that up.

Mr. KAHN. After you get them, or after they are turned over to you, how long will it be before they are delivered to the men in the camps?

Col. THOMPSON. It may be a long time, unless you get some man to sit right there on top of the car and follow it right through.

(Thereupon the committee adjourned until to-morrow, Thursday, December 13, 1917, at 10.30 o'clock a. m.)

HOUSE OF REPRESENTATIVES,
COMMITTEE ON MILITARY AFFAIRS,
Thursday, December 13, 1917.

The committee met at 10.30 o'clock, a. m., Hon. S. Hubert Dent, jr. (chairman), presiding.

STATEMENT OF COL. JOHN T. THOMPSON AND COL. JAY E. HOFFER, OF THE ORDNANCE DEPARTMENT—Resumed.

The CHAIRMAN. Colonel, the first item in which you are interested is on page 62, ordnance stores, ammunition. Have you a detailed statement of that item?

Col. THOMPSON. Yes, sir.

The CHAIRMAN. Will you please give it to the committee?

Col. THOMPSON. The purpose of the appropriation is to manufacture at Frankford Arsenal, 175,000,000 cartridges, caliber .30, model of 1906, \$7,875,000; 15,000,000 pistol cartridges, caliber .45, \$345,000; then to purchase from private plants 1,950,000,000 ball cartridges, caliber .30, model of 1906, \$97,500,000; and 168,491,000 pistol-ball cartridges, caliber .45, \$4,886,250. There are also provided a number of bullets, or cartridges with bullets called tracer bullets, incendiary bullets, armor-piercing bullets and some high-pressure cartridges that are used in the test of rifles to see that they are strong enough, and seventeen and a half million rounds of ball cartridges, caliber .30, model of 1898, for use in the Krag rifles which will be used for guard purposes in the home guard. The total amount of this appropriation pertaining to the small-arms division is \$135,585,000, and the remainder of the appropriation pertains to what is termed the gun division, which handles the hand grenades, rifle grenades, drop bombs, and articles of that kind. Col. Hoffer can explain in detail that part of the appropriation.

Mr. KAHN. Col. Thompson, of course, you saw the article in this morning's paper complaining that Congress has not helped the Ordnance Bureau in the matter of voting funds, and so on. You saw that in the paper?

Col. THOMPSON. Yes.

Mr. KAHN. Now, I want to ask you whether this amount that you have named to us is all that you want for the specific purposes that you have named. Is it all that you can use for that purpose?

Col. THOMPSON. Mr. Kahn, I think I stated at the beginning of this hearing that this was for 1,500,000 men, and of course the determination of the number of men to be estimated for is not a matter under my control.

Mr. KAHN. Then let me ask you this question: Assuming we have 1,600,000 men under arms at present, and I believe the War Department so states, and that a new or second increment of the drafted men will be called in March and that they will be put into the cantonments for drill and preparation to go to the front, will the amounts that you have stated be enough for that purpose?

Col. THOMPSON. May I ask for information? I understand the number of men now provided for is 1,300,000.

The CHAIRMAN. It has been stated in so many different ways that I do not know what it is. Some claim it is 1,300,000 and some 1,600,000.

Col. THOMPSON. If it is 1,300,000 men and 500,000 men are called, that will make a total of 1,800,000 men; and this estimate is for 1,500,000 men. Therefore the estimate would be short ammunition for 300,000 men—the difference between 1,800,000 and 1,500,000.

The CHAIRMAN. What would be that difference in dollars?

Mr. KAHN. Can you put that in the hearings?

Col. THOMPSON. Yes, sir. I would state, Mr. Chairman, that this is a very simple matter of figuring. Roughly speaking, there are required about 1,400 cartridges, caliber .30, per man, and that would be 300,000 times 1,400 multiplied by the price of cartridges, which would be about \$50 per 1,000, and likewise for the pistol cartridge.

Mr. KAHN. Col. Thompson, will you kindly put into the hearing figures showing what additional sums will be needed if the Army is increased during the next fiscal year up to 1,800,000?

Col. THOMPSON. Yes, sir.

Mr. KAHN. And if it is increased to 2,500,000 men and to 3,000,000?

Col. THOMPSON. Yes, sir.

	Value per thousand	1,612,000 men.		1,800,000 men.	
		Requirements.	Value.	Requirements.	Value.
<i>To manufacture.</i>					
Ball cartridges, Cal. .30, 1906.....	\$45	175,000,000	\$7,875,000	195,408,000	\$8,793,360
P. B. Cart., Cal. .45.....	23	15,000,000	345,000	10,749,000	245,227
<i>To purchase.</i>					
Ball cartridges, Cal. .30, 1906....	50	1,950,000,000	97,500,000	2,177,406,000	108,870,300
P. B. Cart., Cal. .45.....	29	168,391,000	4,886,250	188,140,000	5,456,060
Ball Cart., Cal. .30, tracer bullet..	75	141,500,000	10,612,500	157,989,000	11,849,175
Ball Cart., Cal. .30, incendiary bullet.....	75	141,500,000	10,612,500	157,989,000	11,849,175
Ball Cart., Cal. .30, armor-pierc- ing.....	75	35,500,000	2,662,500	39,640,000	2,973,000
Ball Cart., Cal. .30, Vel. 2,140 f. s. for testing armor plate.....	50	1,215,000	60,750	1,357,000	67,850
High pressure Cart., Cal. .30.....	50	1,215,000	60,750	1,357,000	67,850
Ball Cart., Cal. .30, 1898.....	50	17,655,000	882,750	19,714,000	985,700
Multiball Cart., Cal. .45 (Spring- field rifle or carbine).....	35	2,200,000	77,000	2,456,000	85,960
			135,575,000		151,383,657

	Value per thousand.	2,500,000 men.		3,000,000 men.	
		Requirements.	Value.	Requirements.	Value.
<i>To manufacture.</i>					
Ball cartridges, Cal. .30, 1906.....	\$45	271,400,000	\$12,213,000	325,680,000	\$14,655,000
P. B. Cart., Cal. .45.....	23	23,262,000	535,026	27,915,000	642,045
<i>To purchase.</i>					
Ball cartridges, Cal. .30, 1906.....	50	3,024,175,000	151,208,750	3,629,010,000	181,450,500
P. B. Cart., Cal. .45.....	29	261,305,000	7,577,845	313,546,000	9,093,414
Ball Cart., Cal. .30, tracer bullet.	75	219,427,000	16,457,025	263,314,000	19,748,550
Ball Cart., Cal. .30, incendiary bullet.....	75	219,427,000	16,457,025	263,314,000	19,748,550
Ball Cart., Cal. .30, armor-piere- ing.....	75	55,055,000	4,129,125	66,067,000	4,955,025
Ball Cart., Cal. .30, Vel. 2,140 f. s. for testing armor plate.....	50	1,884,000	94,200	2,261,000	113,050
High pressure Cart., Cal. .30.....	50	1,884,000	94,200	2,261,000	113,050
Ball Cart., Cal. .30, 1898.....	50	27,380,000	1,369,000	32,857,000	1,642,850
Multiball Cart., Cal. .45 (Spring- field rifle or carbine).....	35	3,402,000	119,420	4,094,000	143,290
			210,254,616		252,305,924

The CHAIRMAN. Right in that connection, Col. Thompson, is it not a fact that the total appropriations that were given last year by this committee and by the Appropriations Committee were finally based on an Army of 2,300,000 men?

Col. THOMPSON. Mr. Chairman, I can not say that of my own knowledge.

The CHAIRMAN. You do not know?

Col. THOMPSON. No, sir.

The CHAIRMAN. The amount of small arms that you are asking for here, you say, is for an Army of 1,500,000 men; that means 1,500,000 men who will actually use the small arms, does it not, and it does not necessarily mean a total Army of 1,500,000 men?

Col. THOMPSON. It means a total Army of over 1,500,000 men. [See also answer, page 2, hearings of Dec. 12.]

The CHAIRMAN. You stated that Col. Hoffer could explain some items of the bill also.

Col. HOFFER. Mr. Chairman, included in the estimates submitted under the heading "Ordnance stores, ammunition," was the sum of \$254,415,000 to cover the following general classes of material: Hand grenades, rifle grenades and their accessory, and drop bombs. Included in the term "drop bombs" are all the classes of offensive articles that are dropped from aeroplanes. The estimates upon which the appropriations were made were based in this case upon a force only slightly greater than 1,000,000 men, because it was expected that we would be able to get other appropriations from Congress early enough so that this class of material could be procured for the additional men by the time the men were ready to handle it. It has been found necessary to materially revise that estimate, primarily on account of the drop-bomb portion of it, and also on account of the fact that it is considered unwise to run too close to your supplies; and upon Gen. Pershing's recommendation it has been decided that

it is necessary to provide what I called the other day a reserve, but which is really an allowance sufficient to keep a one month's supply with the troops, a three months' supply in the base depots in France, a one month's supply in transit, and a two months' supply in reserve in the United States. You can readily see that providing that far ahead means a considerable increase in the amount of material of this class that must be procured before any given date. Furthermore, we have obtained further information with regard to the aeroplane program. That program is based upon a certain number of squadrons, and, as far as we have been able to understand, that portion of the program, which is very extensive, will be carried out, irrespective of the size of the Army. For these reasons, to provide the material that will be required in this class by September 1, 1918, will require the additional sum of \$277,800,000, and it is necessary to increase our estimates for the calendar year from September 1, 1918, to September 1, 1919, by \$41,000,000.

The CHAIRMAN. In addition to——

Col. HOFFER (interposing). In addition to the \$277,800,000 which should be made available at the earliest possible date. The \$41,000,000, if made available within the next three or four months, will be available in sufficient time to enable us to make our preparations and to place the orders.

The CHAIRMAN. Do you mean to say that you are already short in the appropriation of \$212,798,000 given you last year, as late as October? That is what you got last year in all, and the last appropriation was made on October 6.

Col. HOFFER. For this particular purpose the department received in the appropriation acts of 1917 approximately \$41,000,000, the exact amount being \$40,981,540, and that is all the money carried in the three appropriation acts of the calendar year 1917 available for this particular class of material.

The CHAIRMAN. And that has been exhausted?

Col. HOFFER. Yes, sir; it has all been practically obligated, or it will be within the next 10 days or 2 weeks. I would like to correct that statement, Mr. Chairman, because I am advised by my assistant that the entire amount is obligated. The size of the force to be provided for has very little effect upon the total amount required. It would have no effect, of course, upon the deficiency of \$277,800,000 which I have referred to, and an increase in the size of the force to 3,000,000 men would only increase the additional sum required for 1918-19 from \$41,000,000 to \$76,000,000. To summarize, there should be made available at the earliest practicable date for this class of material \$277,800,000 to cover deficiencies in our estimates up to September 1, 1918, and there should be added to the amount carried in the estimates for 1918-19 for ordnance stores, ammunition, \$41,000,000, to make up for the deficiency for the period from September 1, 1918, to September 1, 1919.

Mr. GREENE. That latter is not a real deficiency, but it is an anticipated one?

Col. HOFFER. I had better say "revision of our estimates" from September 1, 1918, to September 1, 1919.

Mr. FIELDS. What amount do you need, Colonel, to be made immediate available?

Col. HOFFER. \$277,800,000.

Mr. SHALLENBERGER. Do you mean to say that that is a part of the \$290,000,000? You do not want \$277,800,000 in addition to the \$290,000,000? You said you wanted \$277,800,000 made immediately available.

Col. HOFFER. Yes, sir; \$277,800,000 should be made immediately available. Then, I would like to increase the estimates in this bill by \$41,000,000—

Mr. SHALLENBERGER (interposing). What is the total amount?

Col. HOFFER (continuing). Which would make available under this appropriation for this class of material \$254,415,000 plus \$41,000,000, or \$295,415,000. So, the total amount which will be required for this purpose will be \$277,800,000 plus \$295,415,000.

Mr. SHALLENBERGER. When you say "for this purpose," did you mean for these bombs?

Col. HOFFER. For the classes of material I enumerated—hand grenades—

Mr. SHALLENBERGER (interposing). That is, outside of rifle ammunition?

Col. HOFFER. Yes, sir; altogether.

Mr. SHALLENBERGER. Does that leave the difference between \$277,800,000 and \$431,000,000 as all the money you will have available for rifle ammunition?

Col. HOFFER. I so understand.

Mr. SHALLENBERGER. It looks like you are taking almost all of the money for explosives rather than for rifle ammunition. If you take \$277,800,000 out of \$431,000,000—

Col. HOFFER (interposing). That happens to be the case all along the line with reference to this class of material which is in the nature of projectiles.

Mr. SHALLENBERGER. Does that leave you the amount that you think you need, Col. Thompson?

Col. THOMPSON. I understand that it does.

Mr. SHALLENBERGER. I thought he was cutting into your appropriation?

Col. THOMPSON. No, sir.

Col. HOFFER. In order to properly classify the various articles required, it is necessary to ask for them under various appropriations, and when it comes to the question of these various articles which have only come into existence in the last two years it is difficult to find appropriations that they will fit, and so it is necessary to put them under the appropriations which appear most applicable, and hence avoid changes in the wording of the appropriation acts. Perhaps, in order to avoid any possible misunderstanding, it should be stated this way: The bill now calls for \$390,000,000 under the heading "Ordnance stores-ammunition"; I request that that amount be increased by \$41,000,000, and that, in addition thereto, there be appropriated and be made immediately available the sum of \$277,800,000.

The CHAIRMAN. You want \$277,800,000 made immediately available?

Col. HOFFER. Yes, sir; \$277,800,000 should be made immediately available.

Mr. SHALLENBERGER. Have you any assurance that you can procure \$277,800,000 worth of this character of explosives and weapons at once?

Col. HOFFER. This class of material can not be procured at once, but under the existing law we can not enter into a contract without having either the funds on hand or a contract authorization to an amount equal to the total amount carried by the contract, and so, in order to start the work of procurement of the material that we require, we must either have the funds or a contract authorization for the entire amount, although it may be a year before final payment is made.

Mr. SHALLENBERGER. Is there any place where you can produce \$277,800,000 worth of that character of explosives in this country or in any other country?

Col. HOFFER. We expect to be able to procure it. We must procure it, and every effort is being made to develop additional capacity to provide it. In some cases we are asking almost the impossible, but that must be our program, and every effort must be made to procure the material. The first thing we need is either the appropriation or a contract authorization to start the work, because we can not enter into a contract unless we have, as I have said, sufficient funds in cash or a contract authorization to complete it.

Mr. SHALLENBERGER. Will you not have to construct some factories in this country for that purpose?

Col. HOFFER. Undoubtedly we will have to construct factories.

The CHAIRMAN. Are you advancing money for these enterprises now, or for factories to be established?

Col. HOFFER. We are covering the provision of additional facilities in several ways. In some cases the additional facilities are provided by the extension or rounding out of existing plants. In minor cases the additional plant facilities remain the property of the contractor, and a certain part of it is allowed to be amortized in the price that we pay for the material. If the plant extension is of sufficient magnitude and of a character which would make it of little value to the contractor at the conclusion of the war, we are agreeing to pay for and take title to the additional facilities we are providing. In that case we pay for the additional facilities as they are installed, upon the presentation of proper vouchers, checked by our officers and certified to as properly coming under the contract both as to quantity, quality, and price, and in that way we make partial payments during the preparatory work. We are also in many cases making partial payments during the manufacture of articles. For example, we are agreeing to pay contractors 80 per cent of the cost of raw materials when delivered and paid for. Now, as a further step, we are beginning to operate under the provisions of the recent legislation authorizing advance payments not to exceed 30 per cent, under such regulations as the Secretary of War and the Secretary of the Navy may prescribe. The Secretary of War has established a war-credits board, to which board are referred all cases where an advance payment is considered desirable. Action has been taken on one or two cases, so far as our department is concerned, and, undoubtedly, there will be many cases arising, as the manufacturers are finding it very difficult, indeed, to finance operations of the magnitude that they are called upon to undertake.

The CHAIRMAN. Who constitutes that War Credits Board?

Col. HOFFER. One member is Col. Samuel McRoberts, of the National City Bank, of New York, who has been commissioned a colonel in the National Army and is on duty with the Ordnance Department. The plan is for the contracting officer to pass on the reliability of contractors and their capacity to do the work—in other words, to carry the work up to the point where it is decided a contract should be placed with a certain firm. Whether or not the contractor should have financial assistance, whether it is required, and how that financial assistance should be rendered, and what protection the Government should demand, are the points which are being passed upon by the War Credits Board.

The CHAIRMAN. Authority was given in one of the appropriation bills of last year——

Col. HOFFER (interposing). In the bill of October 6.

The CHAIRMAN (continuing). To advance money to private manufacturers, but I notice you are not asking for that authority to be continued in the next appropriation bill.

Col. HOFFER. I think it is the intention to have it continued, and I think it is most desirable and most necessary.

Mr. SHALLENBERGER. Are you going to manufacture those explosives in this country or in France? I am referring to the \$277,800,000 worth of high explosives.

Col. HOFFER. We can not rely upon any country outside of the United States to help us in regard to powder or explosives.

Mr. SHALLENBERGER. Will it not be a very dangerous proposition to try to remove these high explosives across the sea, and would it not be advantageous if they could be produced in France? For instance, how many ships of the size of the ship that exploded at Halifax would it take to transport these explosives? They are very dangerous to handle, are they not?

Col. HOFFER. They are dangerous unless they are properly designed and properly manufactured, and the latter depends upon the degree of watchfulness in the inspection. For example, take a round of 3-inch ammunition and consider the severity of the shock it receives when fired from a gun. There is no blow that it could possibly get in handling or shipment that would compare with the shock of the discharge of the gun. We consider all of these explosives and all of this ammunition sufficiently safe to transport.

Mr. SHALLENBERGER. That is the point I wanted to bring out.

Col. HOFFER. There is another thing: It would be impossible for England or France or any other of our allies to take care of our demands. Furthermore, increased demands are being made upon this country owing to the shipping conditions, because so much of the raw material must come from the other side of the ocean, and the tonnage is materially reduced if we can ship finished products and not ship raw material, which weighs so much more, of course, than the finished product.

Mr. GREENE. Is some part of this ammunition that goes across shipped with the primers and other things of that kind detached to be assembled over there as a means of precaution during shipment?

Col. HOFFER. In the case of many of our projectiles and bombs the detonators are shipped separately, which would minimize the effect of a premature explosion on shipboard or in storage. Of

course, gentlemen, you will appreciate that the bulk of this amount we are asking for is for drop bombs, and it is merely tying up with the very extensive program which has been inaugurated by the Signal Corps and which everyone considers should be carried out, and we are obligated to furnish the Signal Corps with this amount of material of these classes in order that the aeroplanes may be used effectively.

The CHAIRMAN. You furnish the Signal Corps with all this material?

Col. HOFFER. Yes, sir; we furnish the bomb-dropping device, which is fitted into the aeroplanes; we furnish the sights for controlling the time at which the bomb should be dropped; and we furnish the bombs themselves.

The CHAIRMAN. We passed an appropriation of \$640,000,000 for the Signal Corps last summer. Did you handle that part of the appropriation in the purchase of this material?

Col. HOFFER. It has not been considered that that sum or any part of it was available for this class of material for which we are now asking funds and have asked funds in the past.

The CHAIRMAN. Then you have not actually used any part of that appropriation for this purpose?

Col. HOFFER. Not a cent, sir.

Mr. KAHN. Colonel, following up the line of questions of Gov. Shallenberger, as a matter of fact, England, when she found the great need for ammunition, took over sewing-machine factories, typewriter factories, and all activities of that kind and set them to work manufacturing parts of ammunition?

Col. HOFFER. Yes, sir.

Mr. KAHN. Have you attempted to do anything of that kind in this country as yet?

Col. HOFFER. We have in the case of hand grenades; yes, sir; and we contemplate, in the procurement of this class of material, interfering as little as possible with organizations that are capable of and should be called upon to work upon the more difficult and more highly technical materials.

Mr. KAHN. But if you really need all this material for which you are asking will you be able to manufacture it by taking over those various factories and putting them all at work manufacturing the stuff you want?

Col. HOFFER. The only doubtful element is that of time. It takes time to do all this. It takes time to find these people; it takes time to train them and get them started in this work.

Mr. KAHN. You mean the laborers and the mechanics?

Col. HOFFER. That is a problem which the manufacturer is struggling with; but the selection of the people to do this work and entering into negotiations as to the terms under which they will do it requires time.

Mr. KAHN. Then, we find ourselves practically in the same position that England found herself in at the beginning of the war?

Col. HOFFER. Yes, sir.

Mr. KAHN. And we are not taking any lessons from England by putting these factories at that work now so that they will be turning out the material. The most important thing now is to win this war.

It is much more important than making sewing machines and typewriters, and this committee, I take it—speaking for myself at any rate—wants to give the War Department every possible assistance in getting the supply as speedily as possible and in equipping factories in this country so that they can turn out the quantity that you want. Are you doing anything at all in that direction other than that little thing that the captain spoke of?

Col. HOFFER. We have gone this far, Mr. Kahn, in that we have obligated all the money which has been appropriated to date, which shows we have succeeded in finding people whom we consider satisfactory and have made satisfactory arrangements with them whereby they have started on the manufacture of all the material for which we have appropriations. We will continue the same process just as soon as we get additional money.

Mr. KAHN. Then, the apprehension of Gov. Shallenberger that you will not be able to turn out all this material within the year is rather far-fetched, is it not?

Col. HOFFER. We hope to be able to turn it out, but no one can hope to predict the difficulties that are being encountered. For instance, a powder plant shuts down to-day because it can not get coal. All those questions are coming up and are causes of delay; also the scarcity of materials. As I say, it is merely a question of time.

Mr. KAHN. Then, it would be a fair thing to say that there are many factors that make for delay and not Congress alone?

Col. HOFFER. Correct, sir; but we can not move, as I said, without the funds or the authorization. As long as we have money which is not obligated then the responsibility is upon us at least to obligate that money, because we have not utilized the funds or the authorization which Congress has given us; but when we have reached the point where we have exhausted our funds any further expansion of our activities must wait upon appropriation or authorization.

Mr. KAHN. Then, if this committee authorizes the amount of money you require, as you have stated to us, you will be able within the next fiscal year, practically, to furnish all the munitions of the character with which you are charged to get ready; you will have them all ready probably by the end of the fiscal year?

Col. HOFFER. We hope to be able to have them all ready. We would immediately start—

Mr. KAHN (interposing). Then, if Congress does appropriate the money, that is all that Congress can do, and if they are not gotten ready, it is somebody else's fault, is not that it?

Col. HOFFER. Except that these other factors, the factors of labor and the other elements which affect and retard manufacture are factors beyond the control of the Ordnance Department.

Mr. KAHN. And beyond the control of Congress.

Col. HOFFER. Well, it may be.

Mr. KAHN. How could Congress control it? If there is any way that Congress can do anything, let us know. You are the gentlemen who are charged with the duty of getting the material, and we are charged with the duty of appropriating for it. If we do our share, why will it be the fault of Congress, if the material is not turned out, and what further thing ought Congress to do to enable you to get it out. Is there any legislation you need?

Col. HOFFER. I am not qualified, Mr. Kahn, to speak in regard to the general subject of legislation which would assist the Ordnance Department, because my own particular troubles are troubles which every one in the Ordnance Department is experiencing and every one in the department, and I would hesitate to express an opinion upon that subject.

Mr. KAHN. But Congress is rather sensitive about these things, too, and Congress is being blamed by a high officer of your department for not being willing to do things that it ought to have done. Now, speaking as one member of this committee, I want to say to you that I want to do everything that can be done to put you on a sound footing and to put the Army on a sound footing. Now, tell us wherein Congress must act so as to enable you to get just what you need.

Mr. GREENE. Right along that line, if Mr. Kahn will permit me, I have a concrete case to bring before you, and if it is of any advantage to the department to know about it, there are perhaps a number of similar cases and this is a good time to emphasize it. I know of a town which is ordinarily a very busy, bustling town along certain manufacturing lines which now, on account of the pressure of war, has been put somewhat in the shade. I have letters from responsible persons there asking whether their plants as they now stand, consisting of several varieties of plants, might be utilized by the Government in any way, by transformation of machinery or readjustment in some fashion for the purpose of making war munitions or Army supplies or anything that might be needed. To whom should I present such a proposition? Do you people in the Ordnance Department want it?

Col. HOFFER. We will be very glad to have it.

Mr. GREENE. Would somebody go there and make an examination and see if those plants actually can be made available for your service. They are at your service if they can be made available.

Col. HOFFER. In the expansion of our organizations we are developing production sections or divisions, and the production section, for example, of my division is charged with the duty of locating, of developing, and recommending the companies with whom my purchasing section should negotiate for the procurement of the articles we need. All that information is being tabulated and assorted. One great trouble is the difficulty of organizing in such a short time a body capable of doing this work. You can get some idea of the magnitude of the problem confronting us when I tell you that the gun division, of which I am at present the head and which is charged with the procurement of cannon, cannon ammunition, and trench-warfare material, started this war with three officers and eight clerks. We were able to get probably 1 dozen officers of the Army, including officers of the Ordnance Department, who had some familiarity with this work. The organization has grown so far to over 500 officers and 1,800 clerks. We should have now at least 1,000 officers and practically double that number of clerks, and you can see the difficulty of trying to build up an organization of technical men at that rate.

Mr. GREENE. Yes; I appreciate that. Now, let us take the concrete case, for instance, which I have in mind. If I should go to the Ordnance Department and say that I was coming in the interest of

a community that had a diversity of idle or partly idle manufacturing plants, would I be assigned to call upon some officer who could take a comprehensive view of the situation in the sense that he could detail some one to examine all the plants and see what parts of your different functions could be supplied by any or all of the various plants, or would I have to be put through the usual process involved in the traditional "passing of the buck" and sent all around to various offices and finally find out that there is not a single man who could take a comprehensive view of the situation, but that they would have to send a specialist to each plant?

Col. HOFFER. The organization is not large enough at the present time to make an actual inspection of every plant and every community that is brought to its attention. There are certain companies and certain organizations so well known and whose experience is such that there can be no question of their ability to handle many of the problems that are confronting us, that for the time being we are naturally utilizing for this purpose what you would call the best assets of the country. Now, when those companies who are known to be able to undertake this work are exhausted, then we will commence to reach out, but it is impossible at this time, with the pressure of work and trying to place there orders with responsible parties, to stop and take men, because the technical men we have are very limited and very difficult to get, and have them make this inspection of these various places.

Mr. CALDWELL. I want to call your attention to one particular case along that line. A man by the name of Dupuy, recognized by the Machinery Club of New York as one of the best machinery experts in the country, applied for a major's position in your department. He was recommended by an Army officer of the regular establishment of the grade of major and was sent for an examination and was turned down because he did not have technical skill. Now what kind of man do you want for these jobs? His name was Dupuy and he lives at Forest Hills and his application is on file in your office now, together with the Army officer's indorsement, and I know him to be one of the highest men in the great city of New York, making \$15,000 dollars a year now, and has been making \$15,000 a year for a number of years, and he is willing to take a major's commission, if you will give him such a commission.

Mr. MCKENZIE. Does he do the technical work or is he at the head of the concern?

Mr. CALDWELL. He is the man who does the technical work himself.

Mr. OLNEY. Right in line with Mr. Greene's suggestion, 10 minutes ago there was brought to my attention—and I want this for my own information—a man who has available a plant with a splendid water-power privilege, side tracks, machinery, and so forth, equipped to make twine. I realize the sense of Mr. Greene's argument about "passing the buck," and for my own information, I would like to know whether I should have that man, who has an idle plant ready to turn over to you with the labor, go to the War Industries Board or to Mr. Bernard Baruch or Mr. Robert Brookings or to you?

Col. HOFFER. The War Industries Board is collecting data with reference to the capacity and possibilities of various plants, and each department of the Government and each division of each department

is tabulating as far as it can and as fast as it can and as accurately as it can the data in so far as it affects its own particular needs.

Mr. GREENE. That is exactly the information I want to get, and without offering this in a critical sense, naturally you are interested in the gun line and somebody in some other division is interested along another line and here is a diversity of plants and nobody knows now which one of them if any will fit in with any of the particular lines, and that means there must be a general survey first in order to determine how these plants shall work, and the result is if I go to anyone of the specialists in the department he will immediately say to himself, "Will it fit my work?" Of course, I do not know, and nobody knows.

Col. HOFFER. Answering your specific question, so far as the Ordnance Department is concerned, if the matter is taken up with Gen. Wheeler, in the office of the Chief of Ordnance, who has general charge of production, he would be the proper person to take the matter to in so far as the Ordnance Department as a whole is concerned. I would be glad to have anyone sent to the gun division, and I will have my production section interview him and find out the possibility of the gun division being able to utilize such capacity.

Mr. GREENE. Of course, you can see that it might be, if I undertook such an errand, it would turn out when an inspection was made that these plants were more adapted to manufacturing quartermaster material than ordnance material. In other words, we are looking for some one general center which will undertake to make a scrutiny and a division of such capacity.

Col. HOFFER. That would naturally come under some coordinating body such as the War Industries Board, and the War Industries Board is not fully organized to do that work; and there is no organization in the Government, so far as I know, that is organized to do that work; and in the absence of such a general body capable of analyzing the entire capacity of the country and submitting lists, for example, to the Ordnance Department, which can be subdivided among the various branches of that department, and submitting another one to the Quartermaster Department to be subdivided there—in the absence of any such general body, the only thing that the various divisions and branches of the Government can do is to try to collect as much of these data as they can themselves.

Mr. GREENE. Then your answers suggest, right in line with what Mr. Kahn said, that it would evidently be wise to have Congress authorize the creation of, or constitute under such powers as it may have, a general board that would be the first collecting source, and from which the distribution to these different departments might be made, after the general board had said what the plants were and what they could do.

Col. HOFFER. The result of such a board working intelligently would be of inestimable value to all the departments.

Mr. GREENE. First a general survey of the plants themselves and then a distribution of their several specialties to the departments concerned.

The CHAIRMAN. Do you not think, gentlemen, that is a question we ought to discuss with the Secretary, as to what the policy should be?

Mr. GREENE. I understand, and I do not want to delay the hearing, but I would suggest that wherever any matter like this impinges on any one of the divisions, each one naturally will have information in particular detail as to the application of the principle to his division; that is all.

Col. HOFFER. Mr. Chairman, perhaps I have already said too much.

Mr. McKENZIE. Mr. Chairman, may I say a word and then ask a question? I have had some little experience with manufacturers from my home district, and I had a very pleasant meeting with some of the representatives of the Ordnance Department yesterday, and I fully appreciate what these men are up against and the utter futility of simply going down to these men and saying, "I have a factory in my town, and they employ 40 men and do this and do that and do the other thing," and I made the suggestion yesterday in the office of one of these gentlemen that, in my judgment, the thing that a manufacturer ought to do first is to make out a detailed statement of his floor space, the machines he has, the character of the machines, what he makes, and give a full description of the plant and a statement of how many men he employs and what the possibilities are in that community, and go armed with a statement of that sort, and then you have got something tangible to put before these officers. To ask these technical men to go to Illinois or Vermont or Massachusetts or South Carolina to look over a factory at this time, to my mind, is utterly out of the question, while I am sure they would get fair treatment if the thing is presented properly. I know I do. I was treated very nicely by the gentlemen over there in this department, and the men who were here offering their services went away feeling they had gotten a great deal of valuable information, and went home with the idea of trying to do something to help out the Government.

Now, getting down to my question: Colonel, you are manufacturing some of these bombs or having them manufactured at this time, as I understand it?

Col. HOFFER. Yes, sir.

Mr. McKENZIE. And you have made certain arrangements to manufacture them, so far as you have got money to pay for the article manufactured?

Col. HOFFER. Yes, sir.

Mr. McKENZIE. You have come to us and asked for a very large appropriation here for the continuance of the manufacture of bombs and aeroplane fixtures, etc. Have you at this time consummated, or have you in your mind's eye, even, just where you can place this money to go right on with this work; or, in other words, is the appropriation the initial thing, and then all the other work a matter which has to come afterwards, or have you in your organization now the plans laid whereby you can expend this money?

Col. HOFFER. We know now where we can place orders that will take one-third of this sum we have asked for immediately, and the placing of orders for the remainder is simply a question of locating or developing facilities.

Mr. McKENZIE. Right there, Colonel, if that statement is true, then you have made arrangements sufficient, at least, to take care of all the aeroplanes that we will be able to get to the battle front until you are prepared to go on manufacturing more; is that true? In

Col. HOFFER. But the material will not be.

Mr. GORDON. The appropriation will be available, will it not?

Col. HOFFER. Yes, sir; but in considering this plan it is necessary to consider when the material will be available, and we have usually considered some period like September 1 or October 1.

Mr. GORDON. Now, the whole appropriation will be available after the 1st of July, 1918.

Col. HOFFER. That is right, and for that purpose I ask under this general heading \$295,000,000, or \$254,000,000 plus \$41,000,000, but in order that we may now inaugurate the manufacture of material that must not only be started now but must be mostly completed by September 1, 1918, we must have appropriated and made immediately available, if possible, the additional sum of \$277,800,000.

Mr. GORDON. So that you can make contracts before the beginning of the next fiscal year?

Col. HOFFER. Yes, sir; to make contracts promptly, if necessary. My people are prepared now to place orders for material that will take one-third of that \$277,800,000.

Mr. GORDON. What is the total appropriation, including what you want to be made immediately available and what you want at the beginning of the next fiscal year? What is the aggregate of it in dollars and cents? You said \$295,000,000 plus \$277,800,000.

Col. HOFFER. Three hundred and ninety million dollars plus forty-one million dollars. For example, the object would be attained by immediately appropriating \$277,800,000 and increasing the amount carried in this bill under ordnance stores ammunition from \$290,000,000 to \$431,000,000.

Mr. GORDON. Four hundred and thirty-one million dollars includes all you want; that is, including what is needed to be made immediately available and what is to be available for the next fiscal year?

Col. HOFFER. No, sir; that does not include the \$277,800,000.

Mr. GORDON. What is the total amount of money you are asking for? Would you add the \$431,000,000 to the \$277,800,000?

Col. HOFFER. The total amount of money that we want is \$708,800,000.

Mr. GORDON. Have you the figures to show what you will buy with that money?

Col. HOFFER. Yes, sir.

Mr. GORDON. Will you put those figures in the record?

Col. HOFFER. The total amount that should be appropriated under the heading "Ordnance stores, ammunition," is \$708,800,000, of which a certain portion has been accounted for by Col. Thompson, amounting to approximately \$135,000,000, which leaves a total amount for the particular purposes that I have discussed of \$572,800,000. So far as hand grenades, rifle grenades, and drop bombs are concerned, the total amount we are asking for immediately and for the next fiscal year is \$572,800,000. I have here a tabulated statement of the estimates used in making up those figures, and if the committee desires it I will, of course, submit it.

Mr. KAHN. When we had the aviation bill before us we received from the Signal Corps certain blue prints, which were not printed. Every member of the committee had a blue-print copy of the items, and why would it not be proper at this time to ask that we be given blue prints of these items?

The CHAIRMAN. I think that would answer our purposes, and you can have a copy made for each member of the committee.

Col. HOFFER. I will do so.

Mr. SHALLENBERGER. When you first appeared before the committee, did you not state the amount you wished to have made immediately available as very much less than the amount you now ask to be made immediately available? Did not your first statement give the amount that you wanted to be made immediately available as something less than \$50,000,000?

Col. HOFFER. No, sir. If I made that statement, it was incorrect.

Mr. SHALLENBERGER. I think the record will show that you did.

Col. HOFFER. The total amount is \$708,800,000, of which \$41,000,000 should be added to the estimates in the regular way and \$277,800,000 of it should be made immediately available.

Mr. SHALLENBERGER. I understand. That is the statement you made to-day; but when you first made your statement I gathered from it that you did not ask for any such sum as that, and I wanted to know how it was possible for you to make such a mistake as I gathered was made.

Col. HOFFER. In what statement—in my statement the other day?

Mr. SHALLENBERGER. Yes.

Col. HOFFER. That was for a different class of material.

Mr. SHALLENBERGER. No; it was in regard to this particular item. When you appeared you gave us a statement of what you wanted for bombs, and you asked that a certain amount of it be made immediately available; but that amount you asked then was less than this amount.

Col. HOFFER. That covered a different class of material, and I will be glad to enumerate what class of material that statement covered. The item that we have been discussing to-day is not the item I discussed at the last meeting at all.

Mr. SHALLENBERGER. You said it was for bombs.

Col. HOFFER. No, sir; I said bomb sights. I will be glad to enumerate the items which were considered yesterday. They were rifle lights, illuminating rockets, signal rockets, signal lights, position lights, smoke torches, aeroplane flares, Very pistols, bomb sights and drop apparatus, chemical apparatus, and flame projectors.

Mr. SHALLENBERGER. The language that I recall was about hand grenades, rifle grenades, and aeroplane bombs.

Col. HOFFER. On yesterday?

Mr. SHALLENBERGER. I understood you to say that.

Col. HOFFER. No, sir; I think not. We were discussing yesterday the appropriation, Ordnance Stores and Supplies, and to-day we are discussing the item, Ordnance Stores—Ammunition. Reference was made to some of these articles the other day, but I do not believe my testimony referred to these items. Such items as hand grenades come under the latter appropriation.

Mr. QUIN. You are not asking for a dollar more than you need for that business, are you?

Col. HOFFER. It is our best guess and estimate for our requirements.

Mr. QUIN. My notion is that this committee wants to give, and ought to give, every dollar you need. We ought to have a surplus for this purpose instead of a deficiency.

Col. HOFFER. It is as careful an estimate as we could make. When these appropriations are made and the money is available, as we are constantly being obliged to revise certain estimates in accordance with the latest information, we adjust those funds so as to meet the situation at the time. All of these contracts contain a cancellation clause, and we can stop manufacture at any particular time. The department is not going any further in the manufacture of any of these articles than is shown to be necessary.

Mr. QUIN. If the war should end you could stop the manufacture?

Col. HOFFER. We could cancel the contracts; yes, sir.

Mr. GARRETT. In making your contracts with the various concerns of the country for the manufacture of the munitions and articles mentioned here, do you make any inquiry or do you have any estimates made to you of the profits they make on the articles to be furnished to the Government?

Col. HOFFER. Yes, sir; that is very carefully gone into.

Mr. GARRETT. What has your department considered a reasonable profit for those men that the Government is aiding?

Col. HOFFER. Opinions as to the proper profit vary somewhat with the class of material and the risk involved in its manufacture, as well as with the difficulty and ramifications of the manufacture. In the cost-plus contract the general rule is about 10 per cent.

Mr. GARRETT. That is where the contractor assumes no financial responsibility at all?

Col. HOFFER. Practically none; no, sir.

Mr. GARRETT. Now, in the case of a plant where the Government is furnishing the money in advance for the raw material, or is making such additions as are necessary to turn out the work the Government desires to have turned out, and where at the end of the contract the Government is to take the extension property off the hands of the contractor, what kind of profit do you figure on in a case of that kind?

Col. HOFFER. If it is a fixed-price contract it is very difficult to determine exactly what the profit is. In that case the contractor takes many risks in regard to labor, delays due to difficulty in getting raw material, and all the other questions which affect production and affect costs. Our general plan in procuring material where there is competition has been to send letters of inquiry to responsible parties who have been passed upon by my production section as being reliable and competent to do this work. We estimate on how much they can undertake, and send out letters of inquiry asking them for the terms under which they will undertake this business, how much they think they can make, and what is a fair price, and upon the basis of the replies received our negotiators try to make the best possible bargain for the Government. I think that in most of the business we have placed there is a very reasonable profit for the manufacturers. I think they are doing our business at excellent prices, considering the conditions. In that case the profits may run as high as 15 per cent or 20 per cent on a fixed-price contract. I think in many cases the expectation of profit will not be realized.

Mr. GARRETT. The reason I asked that question is that there has been considerable discussion over the country on the subject of profit-taking. In fact, the President referred to something of that sort

in his message, but not in connection, of course, with the Ordnance Department, but with reference to the country generally he referred to the fact that people are trying to make money out of the war. The question in my mind was whether or not the time has not about arrived when the Government should commandeer all of those plants necessary in the making of munitions of war and take charge of them, thus cutting out the question of profit altogether, and when the war is over, the plants could be turned over to their owners in as good condition as the Government received them, with a reasonable compensation for the use of them, thus doing away with the question of profiteering.

Mr. GREENE. Is not that already taken care of?

Mr. NICHOLLS. His question is why they do not do it.

Mr. GARRETT. Of course that is a question of policy, and I will not insist on an answer to it.

Mr. HULL. At the outbreak of the war, how many cannon of the type that you are sending to France did you have on hand?

Col. HOFFER. We have not sent any to France.

Mr. HULL. But you are going to send them. How many of the type you are going to send have you on hand?

Col. HOFFER. We will send seventy-fives, for example.

Mr. HULL. How many of them have you on hand?

Col. HOFFER. We have now approximately about 800 guns of that type.

Mr. HULL. I asked how many you had at the outbreak of the war—that is, about the 1st of April?

Col. HOFFER. We had approximately 600 guns actually completed.

Mr. HULL. Of the type that you are going to use?

Col. HOFFER. No, sir; not of the type we are going to use, the guns are principally 3-inch caliber, not 75 mm.

Mr. HULL. Did you have any?

Col. HOFFER. Except for some 4.7-inch guns, I think none of the exact types that we are going to send abroad. All of those guns, however, are being used in training. Those 800 guns are being used in training.

Mr. CALDWELL. You keep accurate cost data of the operations in the Government plants, do you not, for the manufacture of arms and munitions?

Col. HOFFER. Yes, sir.

Mr. CALDWELL. Have you compared the cost of those munitions when manufactured by the Government with the cost when manufactured under contract?

Col. HOFFER. Yes, sir.

Mr. CALDWELL. Which do you find to be the cheaper?

Col. HOFFER. The price at which we are getting material from private manufacturers is cheaper, and should be because of the greater quantities produced. Our arsenals are very small, and are insignificant manufacturing establishments when compared with the undertakings in which we are now involved.

Mr. CALDWELL. The conditions now, then, are different from what they were before the war?

Col. HOFFER. Yes, sir; because we were manufacturing greater quantities than we were procuring outside.

Mr. HULL. You are purchasing these things cheaper than you are manufacturing them or could manufacture them at your arsenals?

Col. HOFFER. I think that general statement is correct. There may be exceptions, but that is the general rule.

Mr. HULL. Let me ask Col. Thompson if he is manufacturing rifles cheaper?

Col. THOMPSON. I can not say that we are.

Mr. CALDWELL. One more question: Are you paying royalties on the patents that are used?

Col. HOFFER. Practically none.

Mr. CALDWELL. Are you paying a royalty on rifles?

Col. THOMPSON. No, sir.

Mr. CALDWELL. Are you paying a royalty on the pistol?

Col. THOMPSON. The Government is not paying a royalty.

Mr. CALDWELL. Who is?

Col. THOMPSON. I think the company from which we buy pays a royalty.

Mr. CALDWELL. The Government has to pay them a sufficient sum of money to cover the royalty?

Col. THOMPSON. I mean the Government is not paying a royalty directly.

Mr. CALDWELL. What is the royalty on the pistol you are using now?

Col. THOMPSON. I do not know, but I can put that in the hearing.

Mr. CALDWELL. Will you put that in the record, please?

NOTE.—Colt. Co. states it is 75 cents per pistol.

Col. HOFFER. I would like to qualify my statement by saying there are a few articles we intend to pay royalties on.

Mr. CALDWELL. Will you put in the record a statement naming those articles and the royalty? I would also like to know whether the patent is held by American enterprise or whether it is foreign enterprise in each instance.

Col. HOFFER. Yes. No royalties are now being paid on the articles procured from the appropriations under discussion. Negotiations are, however, under way for the following:

Type.	Owner of patents.	Nationality.
Barlow heavy drop bomb..... Contract made on 10 per cent basis, but must be re-adjusted in view of present conditions.	Marlin-Rockwell Corporation....	American.
High-capacity bomb (certain features).....	.....do.....	Do.
V. B. rifle grenade.....	General Electric Co. of Paris.....	French.
3-inch Stokes guns and ammunition.....	Sir Willfred Stokes.....	British.

Mr. TILSON. I would like to ask Col. Thompson if he is entirely correct as to the rifle, or whether or not we are paying a slight royalty on the Buffington sight?

Col. THOMPSON. We are paying no royalty on the Buffington sight.

Mr. TILSON. Were we not paying one a short time ago? I had understood there was a royalty on the Buffington sight, but I may have been misinformed.

Col. THOMPSON. Not that I know of.

Mr. CALDWELL. Colonel, you have stated that we were buying our material cheaper at the private plants than we could make it in the

Government plants, and you stated the reason was that the Government was doing it on a much smaller scale than in the private plants. Could you form an opinion from your experience in Government manufacture as to whether or not if you took over those private plants we could make a saving in the cost of our material. Could you form an opinion from your own personal experience about that?

Col. HOFFER. I would like to ask you if you will tell me what you mean by taking over a plant. Who would operate the plant?

Mr. CALDWELL. The Government.

Col. HOFFER. How would the Government operate the plant?

Mr. CALDWELL. Just like it operates its present plants.

Col. HOFFER. How could the organization be gotten together to operate it?

Mr. CALDWELL. Employ them just like they do.

Col. HOFFER. It is the most difficult thing in the world to build up an organization, as any of you gentlemen who are in the manufacturing business knows, and practically the result would be to simply let the present organizations run them, and then we come down practically to a cost basis.

Mr. GREENE. Then you come down to the difference in overhead?

Col. HOFFER. A slight difference in overhead. The Government has not the personnel to operate these plants and could not recruit it in time and put the men in those plants in order to get the material out in time.

Mr. CALDWELL. When a business is reorganized and a new ownership comes along they carry on the business without any hitch at all.

Col. HOFFER. But how many people do they change in their organization?

Mr. SHALLENBERGER. We have had advocated from very high authority that the Government should operate all the railroads in the United States as a war proposition. Is not that a bigger thing than this?

Col. HOFFER. You are getting me rather beyond my depth, but the whole thing hinges upon the extent to which the Government will operate them; will it simply commandeer the whole organization or will it commandeer the actual operating men of these roads? You can take away, for example, probably the president of the road and replace him, but you can not take away your train dispatcher; you can not take away the man who is really running the business and replace him with another man.

Mr. CALDWELL. I hope you did not assume from my question that I expected to throw away that working organization?

Mr. NICHOLS. Mr. Caldwell's proposition, as I understand it, is this: They are making a profit of from 10 to 15 and possibly 20 per cent, and his idea is for the Government to take over the whole thing and manage it.

Mr. GREENE. May I interrupt you right there. You can take over the plant and its good will and all that sort of thing, but the personnel may not necessarily go with it.

Mr. NICHOLS. But we have got to presume that the personnel is willing to work for the Government for the same wages that they are working for now. They do not care whether they are working for the Government if you pay them the same wages. What Mr. Caldwell is trying to get at is this: Why should not the Government take

over these plants, if these men will work for the Government at the same wages they are working for these private corporations, and save the profit by manufacturing at the same cost these men are manufacturing at?

The CHAIRMAN. Gentlemen, I will have to again suggest that I do not see how this is applicable to this particular item of the bill.

Mr. GARRETT. I would like to ask the colonel one question about which I have gotten confused and I want him to straighten me out for my own information. I understood you to say that you were now procuring rifles and munitions and things of that character cheaper through private concerns than we were making them in the Government arsenals?

Col. HOFFER. Yes, sir.

Mr. GARRETT. If my memory is not serving me a trick, Gen. Crozier testified before the committee in the Sixty-third Congress that the rifles and munitions that were being made in the Government arsenals were made 33½ per cent cheaper than those made in private concerns.

Mr. TILSON. That was probably correct at that time and might not be correct now.

Mr. GARRETT. I want to know how the conditions have changed so that the Government itself can not now manufacture these articles at least as cheaply as the private concerns manufacture them.

Col. HOFFER. I did not mean to include in my statement the question of rifles or rifle ammunition. I am dealing with the general question, say, of artillery ammunition, grenades, drop bombs, etc. I made the general statement I thought an analysis would show that as a whole we were now purchasing our material at a more reasonable cost than that at which it can be manufactured at the ordnance establishments. I further stated that that is due primarily to the fact that these organizations that are being called upon to do this work are doing it on an enormous scale and they are only manufacturing probably one single article, whereas, for example, the total output of Frankford Arsenal is a half a million rounds a year, which is very small, whereas some private concerns are manufacturing 4,000,000 rounds a year, and moreover Frankford Arsenal's 500,000 rounds is divided up among seven or eight different kinds of ammunition, which places the arsenal at quite a disadvantage. There has also been a material labor increase in the Government establishments and other causes, and I think the balance is now in favor of the private manufacturer simply due to the volume of business and the concentration on a particular item.

Mr. GARRETT. For our information can you give us the combination cost of all the guns and munitions that private concerns are making for the Government at this time and those which the Government is making in its own arsenals and submit to the committee which ones are coming to the Government the cheapest?

Mr. HULL. Would not that be a question for Gen. Crozier?

Mr. GARRETT. I supposed I was speaking to Gen. Crozier through Col. Hoffer.

Mr. KAHN. Will you permit me to suggest something? The Government never gave out contracts for the manufacture of rifles. We were manufacturing them all.

Mr. GARRETT. But we were buying rifles from private concerns.

Mr. TILSON. No; there was not a single rifle of that kind made in this country except in our Government arsenals.

Mr. KAHN. And you will remember, Mr. Garrett, we put a provision in the national defense law to allow the Ordnance Department to get the various dies, etc., so that we could manufacture the rifles in other concerns.

Mr. GARRETT. Here is what I am trying to get at: If private concerns now are making munitions of war cheaper than the Government is making them, I want to know how they are doing it.

Col. HOFFER. It would be very difficult to give you that information about artillery ammunition because since the outbreak of the war we have changed practically every design of ammunition, and exact comparative data is not available, and it would be practically impossible within any reasonable time to get it, because for these new types of ammunition we would merely have the arsenal estimates, and it would be impossible to present a comparison which would clearly show the difference in cost with regard to each item, because we would not have manufactured at the arsenal the particular items. The arsenals are manufacturing some, but they have not carried the work far enough along to definitely determine the cost.

Mr. HULL. I want to call the attention of this committee to this fact, although some of the committee have stated it in a different form: There is no testimony here that you are purchasing rifles cheaper than you are manufacturing them at the arsenal; is not that right, Col. Thompson?

Col. THOMPSON. That is right, sir.

Mr. GREENE. I would like to ask Col. Hoffer this question: Do I correctly understand that one of the causes for the cheaper production by private plants, as compared with Government manufacture, is that the private plant buying in great quantities can get its raw material cheaper?

Col. HOFFER. Its being able to manufacture in greater quantities.

Mr. GREENE. Of course, that is true; and, also, is one of the factors—their ability to buy raw materials cheaper.

Col. HOFFER. No; the prices of raw materials are practically fixed now. The price of steel is fixed, and the price of copper and lead, and so on, is fixed. The Government is furnishing those raw materials.

The CHAIRMAN. There is one matter I want to call Col. Thompson's attention to.

Col. THOMPSON. And there is a matter I would like to speak about, and that is with reference to the basis of the estimates.

The CHAIRMAN. Yes; we appropriated last year on the basis of over 2,000,000 men—2,033,000 men and 86,000 officers—and you only asked for \$212,798,000. Now you say you already have a deficiency in that appropriation. I suppose it would take too long to take that up now, but I simply wanted to call your attention to it so you could explain that to-morrow morning.

Col. THOMPSON. May I say in general that what we have on hand is taken in connection with these estimates.

(The committee thereupon adjourned until Friday, December 14, 1917.)

**COMMITTEE ON MILITARY AFFAIRS,
HOUSE OF REPRESENTATIVES,
Friday, December 14, 1917.**

The committee this day met, Hon. S. Hubert Dent, jr. (chairman), presiding.

**STATEMENT OF COL. JOHN T. THOMPSON, BUREAU OF ORDNANCE,
ACCOMPANIED BY LIEUT. COL. E. P. O'HEARN, MAJ. J. E. MUN-
ROE, AND CAPT. E. J. W. RAGSDALE.**

The CHAIRMAN. Colonel, yesterday I called attention to the fact that in the appropriation of the last session of Congress you asked, under this item, for \$212,000,000, and that appropriation was based on an army of a little over 2,000,000 men, and now you are asking for double that amount for an army of 1,500,000 men.

Col. THOMPSON. This refers to the appropriation "Ordnance stores, ammunition," as I understand it.

Under the provisions of the appropriation bill approved May 12, 1917, the total appropriation was \$21,000,000, of which \$8,804,400 was for the small-arms division and \$3,195,600 for the gun and other divisions.

Under the urgent deficiency act approved June 15, 1917, the total amount appropriated was \$131,048,000, of which \$127,516,700 was for the small-arms division and \$3,531,300 was for the gun and other divisions.

Under the urgent deficiency act approved October 6, 1917, the total amount appropriated was \$69,750,000, of which \$33,750,000 was for the small-arms division and \$36,000,000 for the gun and other divisions.

The amount appropriated under the act of May 12, 1917, for the support of the Army, amounting to \$12,000,000, was, I suppose, for the current forces. I did not prepare that estimate.

The CHAIRMAN. That is the point I am trying to get at. You have stated here that this item was based on a total strength of 1,500,000 men.

Col. THOMPSON. Yes, sir.

The CHAIRMAN. In the hearings before the Appropriations Committee last summer Secretary Baker, at page 329 of those hearings, says that the estimates he was asking for, which were finally granted in the last appropriation bill of October 6, 1917, were for an army of 2,033,000 men.

Col. THOMPSON. When did he say that?

The CHAIRMAN. That was in July last, on July 30.

Col. THOMPSON. That was in reference to the urgent deficiency act approved October 6, 1917, in which \$69,750,000 was the total appropriation under the appropriation "Ordnance stores, ammunition." Of that amount the small-arms division got \$33,750,000,

and that was for the purpose of procuring a special class of ammunition which had become of much importance since the previous acts were approved.

The CHAIRMAN. You mean to say they did not ask for enough last year?

Col. THOMPSON. No, sir. I said this was a special class of ammunition which had come into prominence since the previous acts were passed. That is to say, this \$33,750,000 was for 200,000,000 ball cartridges, caliber .30, with tracer bullets, 200,000,000 cartridges with incendiary bullets, and then 50,000,000 cartridges with armor-piercing bullets, which had not been appropriated for specifically in the previous appropriation act.

The CHAIRMAN. Do those items make up the difference?

Col. THOMPSON. Yes; they make up the difference, so far as the small-arms division is concerned. The remaining \$36,000,000 of the \$69,750,000 pertains to the gun and other divisions.

May I add, with reference to this special ammunition, that it is used in the aeroplanes, and at the time the previous appropriation acts were passed there was not sufficient information and knowledge and experience in this country, apparently, to approach the subject in order to get the specific appropriation necessary. It was covered in a general way only in previous small-arms ammunition appropriations.

The CHAIRMAN. Then the bulk of this appropriation under this item is for the air service, with which you were not entirely familiar last summer?

Col. THOMPSON. Yes, sir; especially as to the quantity required.

The CHAIRMAN. The next item, on page 62, is:

Small-arms target practice: For manufacture and purchase of ammunition, targets, and other accessories for small-arms, hand, and machine-gun target practice and instruction; marksmen's medals, prize arms, and insignia for all arms of the service; and ammunition, targets, target materials, and other accessories which may be issued for small-arms target practice and instruction at the educational institutions and State soldiers' and sailors' orphans' homes to which issues of small arms are lawfully made, under such regulations as the Secretary of War may prescribe (acts May 12, 1917, vol. 40, p. 63, sec. 1; June 15 1917, vol. 40, p. 197, sec. 1; Oct. 6, 1917, vol. 40, p. 366, sec. 1). \$75,200,000.

There is a reduction in the amount of the appropriation you are asking for under that item.

Col. THOMPSON. This item, as its title indicates, is for target practice with the arms which use the small-arms cartridges; that is, the caliber .30 rifles, and caliber .45 pistols and revolvers. It also includes an appropriation of \$6,500,000 for grenade work, which is under Col. Hoffer, who is represented here this morning by Lieut. Col. O'Hearn.

This item is for 1,612,000 men, instead of 1,500,000 men, as I before stated. There have been 112,000 men added for the Aviation Corps. These men use, largely, pistols for their personal equipment.

* * * * *

Mr. SHALLENBERGER. When we had this matter under discussion the other day, and the question came up as to the rifle cartridge, it was brought out that you expect to use, in the beginning, the French machine gun, the light machine gun, which a man carries, and which would use the French ammunition, and I asked you if it was not

true that you also expected to use the Browning, which is a light machine gun, and as I recall it now, both you and Mr. Kahn said that that was not in contemplation. Did I understand that correctly?

Col. THOMPSON. May I say in that connection, that this business is such that in one division we do not know the details of what the other divisions are doing, but so far as my knowledge is concerned, the light Browning gun will be used.

Mr. SHALLENBERGER. I have read in the newspapers that in the discussion which has taken place at the hearings now being held by the Military Committee of the Senate, where the Chief of Ordnance is testifying, he has said that the Browning machine gun has displaced the other machine guns, and I want to know if that is true, why it is that this committee is told that that gun is not going to be used? Why can not we get the information in this committee which is given to the other committee?

Col. THOMPSON. To the best of my knowledge, sir, the Browning gun and the Lewis gun and all those guns will be used as a matter of necessity, and those that are used first will be used because they have them first. Lieut. Col. John H. Rice, who is in charge of that subject, can give you definite information about it.

Subject to correction, I would say that all the machine guns are going to be used, and it will be quite a problem even then to get the required number in the required time.

Mr. SHALLENBERGER. I recall that in your statement in regard to the delay in the manufacture of these rifles, you gave us to understand, as I gathered from your statement, that the War Department had had under consideration the subject of the most efficient cartridge, and that finally the rimless cartridge was determined upon, although it required a change of the British rifle to use our cartridge, but that was deemed essential, and it was also deemed essential to use one kind of ammunition throughout the Army, if possible.

Then it was brought out later that the French machine gun, which is similar in type to the Browning gun, would use the French ammunition. Can you tell us how much of this French ammunition would be taken in proportion to the amount of our ammunition? How many of the French machine guns would be given to each company, and how much ammunition would they be required to carry?

Col. THOMPSON. If the proper proportion of machine guns were with modern troops, theoretically, if the firing were maintained in proper proportion, in my opinion, at least two shots would be fired from a machine gun to one from a rifle.

Mr. SHALLENBERGER. I will say, Colonel, that since the testimony that has been given here, I have talked somewhat with a French infantry officer who has had experience with these particular guns, and he tells me that they carry 16 of these light machine guns with each company of men, and that practically 50 men operate the machine guns, or one-fifth of the company. That is to say, that about one-fifth of the company is operating these machine guns, and they shoot so much more rapidly than the other guns that they require a greater percentage of ammunition per man for the machine gun than for the other guns.

Take the machine guns as they are operated at present; each man would be required to carry one-third as much more ammunition for the machine gun as for the ordinary rifle.

The point I would like to have you make clear to this committee is why you told the committee, in response to my question, that we were not going to use this gun. I suppose that you did not know at that time that that was to be done.

When I asked you if it was not a fact that the Browning gun was to be used, I think you stated that it was not in contemplation that that gun was to be used. Was that because you did not have the information, or did you think that the committee ought not to have the information?

Col. THOMPSON. The only thought I had was that the present conditions—we have not got the guns, we will not have them for some time.

Mr. SHALLENBERGER. You meant, rather, to state the present condition, that the prospective condition——

Col. THOMPSON. Yes, sir. If you will permit me to state the prospective conditions, the French Chochaut guns, which are the French lighter machine guns, are simply a temporary expedient that will be used and that will be replaced as quickly as possible by our own style of guns, as soon as they are manufactured.

Mr. SHALLENBERGER. And that is the Browning gun?

Col. THOMPSON. Yes, sir. May I add, as I said before, pretty nearly every suitable kind of machine gun that we can get manufactured will be used.

Mr. SHALLENBERGER. Do you know whether or not you have provided a lot of ammunition to be used in the aeroplane which is going to be fired from a Lewis gun or from some other sort of gun? Do you know what type of machine gun that is going to be fired from?

Col. THOMPSON. It will be fired from the Lewis gun and the Browning gun and the Colt gun and the Marlin-Colt gun.

Mr. SHALLENBERGER. All those guns are going to be mounted in our aeroplanes?

Col. THOMPSON. In our aeroplanes?

Mr. SHALLENBERGER. Yes.

Col. THOMPSON. That is a question I could not answer. I believe, however, there is one—Lieut. Col. O'Hearn tells me that the Lewis gun and the Marlin-Colt will be used in the aeroplanes.

Mr. SHALLENBERGER. I have been informed by an officer, one of the officers of the British Army, a flier, who has had vast experience in the flying corps, that he had been informed that we were not going to use any Lewis guns in our aeroplanes, and the officer who told me this spoke about it as being a state of affairs which tremendously disappointed him, because he thought that their experience on the other side showed that the Lewis gun had demonstrated that it was the gun par excellence for aeroplanes. Can you tell us whether that ammunition is to be fired from the Lewis guns, or has that gun been disqualified from aeroplane service in this country?

Col. THOMPSON. I can not tell you that. That is not within my jurisdiction. All I know is that the ammunition is tested in all machine guns, including the Lewis gun.

Mr. SHALLENBERGER. Do you know whether or not we are buying the Lewis gun in quantities?

Col. THOMPSON. Yes, sir; I would suggest, if I may, that you can get very definite and specific information from the officer in charge

of that particular work. We are all so busy in these tremendous operations that it is practically impossible for any one division to know the details of what the men in other divisions are doing.

Mr. NICHOLS. You do not know what they are going to do with the ammunition after it is purchased?

Col. THOMPSON. That is about all, except that I know all that ammunition is tested in the Lewis gun.

Mr. NICHOLS. Your division furnishes the Army with the material, and it is their duty, and not yours, to determine where they are going to use it.

Col. THOMPSON. Yes, sir. The Ordnance Bureau, as a rule, does not determine what guns are to be used in an aeroplane. I can tell you definitely, however, that all this ammunition is tested in the Lewis gun.

Mr. SHALLENBERGER. It has been constantly stated before this committee that it has not been demonstrated to the satisfaction of the Ordnance Bureau that the Lewis gun would handle the American ammunition satisfactorily. Your ammunition is apparently for the French gun, which is a caliber .30 gun, and I was wondering whether it has been demonstrated that the Lewis gun can handle the American ammunition satisfactorily.

Col. THOMPSON. There is no doubt about that. I can tell you that. Col. O'Hearn says that there are some of those mounted in the aeroplanes now.

Mr. SHALLENBERGER. Then the information I had is evidently incorrect. The information I got about the Browning gun I had to get on the outside.

Mr. McKENZIE. Is it the intent to use identically the same caliber ammunition in the Browning gun, the Lewis gun, and the Marlin gun?

Col. THOMPSON. Yes, sir.

Mr. McKENZIE. Then there will be no difficulty about getting the ammunition mixed. It will all be interchangeable?

Col. THOMPSON. Yes, sir. That is the benefit; but I want to say that with the various types of machine guns the cartridges are inserted into the chamber in a different manner and they are extracted in a different manner, and it is one of the hardest problems we have had. It takes all our intelligence and skill to solve it, because some of the guns require the cartridges to be a little softer near the head, others a little harder than usual, in order to prevent the head of the cartridge case from breaking off. You can make a cartridge for one machine that will be fired beautifully by that machine gun. Put it in another with another action and it will begin to give a great deal of trouble, and that is one of the hardest problems that we have to solve.

Abroad the cartridges for the machine guns usually are limited to fewer types of guns, and I also understand that in France there is just one factory that makes cartridges for aeroplane guns.

There is a certain kind of ammunition that is shipped abroad for aeroplanes—and, of course, it can be used in the hand-operated rifle, which is much easier on cartridges, as you can see—and this ammunition for aeroplane machine guns is issued and marked separately.

Mr. QUIN. How many cartridges will a machine gun shoot in a minute?

Col. THOMPSON. It fires between 400 and 500. It has a shooting capacity very much higher, but when you reach the higher capacity there are apt to be pretty serious mechanical difficulties. You can see that if you shoot 600 rounds a minute that makes an allowance of one-tenth of a second for each shot, and the trouble comes when the extractor pulls out the cartridge case which has just been fired. There is a residual gas pressure there which presses the fired cartridge case against the walls of the chamber of the gun with great pressure, tending to hold the fired cartridge case in the chamber at the same time the bolt with the extractor is trying to extract the case.

Mr. QUIN. That forms a vacuum?

Col. THOMPSON. On the contrary, there is a residual gas pressure in the bore and chamber of a gun firing so rapidly, and that residual pressure comes against the interior wall of the cartridge and presses it out against the chamber, and it holds there, and while held the extractor is pulling rearward on the head; and if the cartridge case is not annealed just right the head is pulled right off; and when you fire rapidly you get into that trouble. You sometimes find it said that the machine gun will fire a thousand rounds a minute. Of course, that is not correct. You would get into serious trouble if you fired at any such speed as that.

Mr. GARRETT. The moment the head of the cartridge is pulled off, the firing has to cease until the other part of the head is shot out.

Col. THOMPSON. Indeed it does—until the other part of the case has been removed by hand.

Mr. GREENE. Does not this experience lead to an approximate standardization of the quantity of supplies, as distributed between the hand rifle and the machine gun, in this respect, that while the hand rifle has now probably arrived at something like the law of averages for its use, and the number of cartridges which a certain number of men will expend in a given time, and you can fix it now with something like accuracy, although the machine gun is in constant use and fires a great many more cartridges at a time than the hand rifle, yet the law of averages can also be applied there, too, so that you have a ratio which is pretty well fixed, between the shoulder rifle and the machine gun, so far as the use of cartridges is concerned? In other words, putting those guns side by side, it would look as if the machine gun was devouring cartridges, whereas it is not, because it is in constant use.

Col. THOMPSON. We have little or no experience in this country about it. All we know is from our research and our experience abroad, and that is constantly changing. In fact, officers who are experts in that line will tell you that such and such a thing was true when they left the firing line, but that they do not vouch for it now. The tendency has been rather to increase the number of cartridges used in machine guns, and we base our experience on their experience. No one can say it is fixed, because every one would use more automatic rifles if they could get them, and the ratio changes for the different armies.

Mr. GREENE. It is not constant?

Col. THOMPSON. No, sir.

Mr. GREENE. Have you approximated any estimate, so far as the supplies you would use are concerned, as to a probable ratio?

Col. THOMPSON. Yes, sir.

Mr. GREENE. What is that ratio?

Col. THOMPSON. I stated it to be about two to one. That is a good proportion, because any cartridges that can be used in a machine gun can be used in a rifle. Some give the proportion as 60 per cent for the machine gun and 40 per cent for the rifle. It runs at about that ratio.

Mr. GREENE. Then, inasmuch as the ammunition is interchangeable, the appropriation for the bulk is not disproportionate; but, you say, the average percentage used in the machine guns and for the shoulder rifles is a variable factor?

Col. THOMPSON. Yes; and the mechanical factor should be considered, to get cartridges good enough to use in those machine guns.

Mr. SHALLENBERGER. Did I understand you to say that, taking an infantry company going into action, they would carry about 50 per cent as much more ammunition than the individual men who have the rifles, or do you mean to say that the machine guns will shoot away more than the shoulder rifles?

Col. THOMPSON. The data we get would show that the machine gun would shoot away out of all the cartridges fired about 60 per cent, and the hand-operated rifles would shoot away about 40 per cent.

Mr. SHALLENBERGER. If we use the French machine gun our troops are going to carry into action more of the rim cartridge than the French, and this matter of not having a light machine gun has put us into the position that we are going to furnish those troops with ammunition we can not use in those rifles?

Col. THOMPSON. Yes, sir; temporarily.

Mr. SHALLENBERGER. It is unfortunate that we have not these light rifles?

Col. THOMPSON. Very.

Mr. SHALLENBERGER. Do you know whether or not the heavy machine guns ordered out of last year's appropriation have been delivered?

Col. THOMPSON. No, sir. I am very anxious to give the committee all the information I can. This operation is a tremendous operation, and we are very much scattered. I just came back about the 1st of May, which accounts for my lack of knowledge on many of these questions which are outside my own work. If I had the information the members of the committee desire, I would take the greatest pleasure in giving it to them, because I know how important it is for them to have full information and the exact truth.

Mr. GORDON. Do you know what the relative range of the machine gun is as compared with that of the rifle? Which one of them has the longer range and by how much?

Col. THOMPSON. The rifle is sighted for about 2,850 yards. I think the machine gun has about the same range; perhaps a little bit longer range. The extreme range of our rifle is about 5,180 yards, but no country utilizes the full range of the rifle. When a man begins to shoot with his naked eye above 1,200 yards he is not very effective. I have seen rifles fired at these high ranges—at a range of 2,500 yards and at 2,700 yards. But that is in targeting, and but very few men have seen a rifle fired at over 1,200 yards.

Mr. GORDON. Would that extreme range apply also to machine guns?

Col. THOMPSON. No; I think the machine gun must be sighted for a longer range, because there you can sometimes get the range by looking at the effect of the striking bullets. I will find out exactly what range the machine gun is sighted for and put that in the hearing.

Mr. GREENE. The shoulder rifle sighted at 2,500 yards and the machine gun fixed at that range can not be absolutely compared as to effectiveness, can they? There is more accuracy and certainty of fire in a well-aimed single shot from a shoulder rifle than there is from many bullets from a rapidly operated machine gun?

Col. THOMPSON. That is a subject of discussion among the theorists—as to the probability of fire in that case. I think it is settled very definitely in favor of the machine gun, because you can see the effect of a swarm of bullets striking at any point in the dust or the clutter of stuff made. I think that the machine gun can be more effectively used at the longer ranges than the shoulder rifle.

Mr. GREENE. I have no doubt but what the effect of machine-gun fire, so far as volume is concerned, must be incalculably deadly, but I was thinking of the law of averages, and I was wondering whether or not in the rapid operation of the machine gun there was a tendency to disperse the fire rather than to concentrate it.

Col. THOMPSON. The law of averages for accuracy alone would be in favor of the shoulder-operated gun for the same number of shots. I should say, positively.

Mr. McKENZIE. Colonel, do your estimates in this appropriation bill take into consideration the amount of money you expect to have to expend in the purchase of trench ammunition?

Col. THOMPSON. Yes, sir.

Mr. McKENZIE. That is all included?

Col. THOMPSON. Yes, sir. I do not like to occupy the time of the committee, Mr. Chairman, but that is a very serious problem with us—this French ammunition. We got a quantity from the French, and if we want any more of it we have to furnish them with the raw material—the copper and the lead, and the other necessary raw material; and if we do not do that, we have got to manufacture those cartridges in this country. We are, as I think I previously stated, manufacturing these cartridges at Swanton, Vt., and we are trying to manufacture them in Upper Alton, Ill., and in Kansas City.

Mr. NICHOLS. You are manufacturing the same kind of cartridges that the French are manufacturing, and they are used in the French guns?

Col. THOMPSON. If anything should happen that our French cartridges should not be found suitable for their machine guns the Chochaut guns, we will use their cartridges and they will allow us to replace those cartridges by our cartridges, which will be good for use in their hand-operated rifles.

Mr. NICHOLS. You make cartridges for French guns in this country?

Col. THOMPSON. Cartridges were made for the French Government at Swanton, Vt. Maj. Monroe corrects me in the statement I made awhile ago, and says that it is the Hotchkiss gun that is the hardest on the cartridge, and not the Chochaut gun; but these cartridges that we are making in this country will be used in both the Hotchkiss and

the Chochaut guns, provided they are satisfactory, and if not, the French will furnish their cartridges made at their special arsenal for that purpose, and we will replace that number by our cartridges for use in their shoulder rifles. But it is quite a problem to make the French cartridge in sufficient quantity.

Mr. McKENZIE. The statement you have just made shows the vital importance of our Government putting every pound of pressure on in getting a sufficient number of our own guns, in order to do away with the complications that occur in sending over raw material, and all the that sort of thing.

Col. THOMPSON. It is a matter of tremendous importance, and the greatest concern to everybody.

Col. O'Hearn has some change in this estimate which he would like to speak to the committee about.

The CHAIRMAN. We will be glad to hear Col. O'Hearn.

Col. O'HEARN. Mr. Chairman, I have a revision of the estimate under the item, "Small-arm target practice," with a view to adding to the estimate as it appears in the committee draft of the bill, the sum of \$3,131,000, making the total that we would now ask for \$78,331,000, in lieu of \$75,200,000.

The material concerned, and which is provided for under this item of the bill, comprises hand grenades, dummy, such as men in the training camps use for practice throwing; hand grenades, practice; live grenades, but of a somewhat cheaper type of manufacture, and those parts which are destroyed when the practice grenades are thrown can be replaced, and the grenades themselves used again.

Then there are also included dummy rifle grenades, for training purposes; live-rifle grenades for training purposes, and dummy-drop bombs, and a considerable number of drop bombs. These we make of an inexpensive type, and they are smoke-producing bombs, and are made in such a way that when the bomb is dropped, it is made possible for the aviator to seen how close he has come to the target. They are a concrete bomb.

For this class of material there has heretofore been appropriated a total of \$13,455,000. The estimates, as previously submitted, has included for this material the sum of \$7,640,200. We are now asking that this be increased by \$3,131,000, making a total now required for this class of material of \$10,771,200.

The \$3,131,000 increase asked for is made up of \$900,000 to cover a deficiency in the appropriations already made, covering the year 1917-18. We ask that this sum be immediately available.

In addition it includes the sum of \$2,231,000, and that is what we would call a revision of the estimate heretofore submitted.

The reason of the need for the \$900,000 to cover the current fiscal year is that the increase in the number of aeroplanes which the Signal Corps states they will have in service requires a very large increase in the number of the practice drop bombs. The number required, according to their estimates as given to us, is increased from about 10,000 to about 450,000, and as their cost is a couple of dollars apiece it means an increase of about \$900,000 in the amount of money needed.

The revision of the estimate calling for something over \$2,000,000 for the next fiscal year, in addition to what we have heretofore asked

for, comes from the increase in the expected number of aeroplanes in service, as previously referred to, and also arises from an increase in the allowances as asked for by the Signal Corps.

The CHAIRMAN. What is the total you are asking for?

Col. O'HEARN. We are asking for a total of \$10,771,200 for this class of material and a total of \$78,331,000 for all classes of material, including those which Col. Thompson asked for.

The CHAIRMAN. Your total appropriation, then, would be \$88,000,000?

Col. O'HEARN. It would be \$78,000,000. The present estimate is \$75,000,000 and we add \$3,000,000, making a total of \$78,000,000.

The CHAIRMAN. The \$10,000,000 you referred to was included?

Col. O'HEARN. Of that amount, \$7,000,000 was previously included.

Mr. McKENZIE. Col. O'Hearn, if you have no objection, will you state what a rifle grenade is? Describe it.

Col. O'HEARN. The rifle grenade is a small explosive projectile. It weighs about 1 pound. It is fired from an ordinary rifle in the trenches. The type that we are using has been taken from the French. It is a very successful type. We like it very much.

Mr. NICHOLS. I saw some of those rifle grenades at Fort Shafter. They have to strike a hard surface before they explode, do they not?

Col. O'HEARN. A reasonably hard surface. They are rather sensitive. Perhaps the type you saw was the older type, which had a stem that went into the end.

Mr. NICHOLS. That is what I saw. They were firing them against hard surfaces, and they stated that if they struck the ground they would not explode.

Mr. GREENE. Are they all impact?

Col. O'HEARN. All impact. There are two very distinct types of rifle grenades. The one which was heretofore in common use, our service type, is a type in which this explosive projectile is fastened through a rod that is inserted in the bore of the rifle. A blank cartridge is used to propel this grenade which is driven out and acts solely upon impact, and if it does not strike squarely or does not strike a reasonably hard surface it may fail to function. The French have developed, and we have adopted, a greatly improved type of rifle grenade that has no stem attached to it. It is fired using the standard small-arm rifle cartridge. It is not necessary to provide a special type of cartridge for that. There is attached to the muzzle of the gun for the purpose of firing these grenades a holder, consisting of a hollow cylinder, about 6 inches long, that is put on and in no way interferes with the use of the rifle as a rifle.

The projectile is about that long [indicating] and about 2 inches in diameter. There is a hole through the center through which the small-arm bullet passes when being fired from the rifle. But behind the bullet there is sufficient gas pressure which spreads out in the rear of this grenade and carries it out of this holder and gives great accuracy of flight up to a range of 200 yards.

This particular type that we have adopted does not depend upon impact to set it off. Incorporated in the projectile is a Bickford fuse, or slow match. That is ignited by an attachment; it is a primer

which is operated by the projectile in passing through the grenade. It is set to explode in about seven seconds, so that regardless of how or where the projectile strikes it will explode after impact. That is a type which is being made by the millions. It does not appear under this item, except such as are to be used for target-practice purposes. The main quantity, the large quantity for service use, appears under one of the items we have previously discussed.

Mr. NICHOLS. These troops that I saw down at Fort Shafter, that I spoke of a few minutes ago, were making their own grenades. They took certain ingredients, and would make the grenades themselves. The officer in command said that he thought it was a very useful thing for the men to learn how to manufacture those grenades, and that they could make them in the trenches. They will take them on a paddle and throw them, just as you throw a rock from a sling.

Col. O'HEARN. We understand that in the earlier days of the war, perhaps not so much in these times, the British did a great deal of manufacturing work, in the manufacturing of grenades and bombs, immediately in the rear of the firing line.

Mr. NICHOLS. That is what I was speaking of.

Col. O'HEARN. I doubt if much of that is done now, because I think the supply from home sources is sufficiently great so that it is not necessary to manufacture them so near the battle line.

Mr. GORDON. These rifle grenades will be used when the enemy is pretty close, will they not?

Col. O'HEARN. Entirely so.

Mr. GORDON. Their extreme range is 200 yards?

Col. O'HEARN. Yes. The inner or near zone is covered by the hand grenade. You can throw that up to a distance of 100 yards. Then the rifle grenade extends the zone 200 yards farther, and then comes the trench mortar. The trench mortars are of varying caliber and power. They cover from that point, and perhaps their shortest effective range is about 500 yards. They will cover up to about 3,000 yards, although 2,700 yards is the best we have now. Then the standard howitzers and guns pick up the zones of fire from that point upward. This grenade has a steel cylinder or sometimes a malleable-iron cylinder filled with high explosives.

Mr. ANTHONY. In the hand grenades do you depend for their explosion on impact or on a time fuse?

Col. O'HEARN. On a time fuse.

Mr. ANTHONY. What facilities has the Ordnance Department for testing out various new devices in hand grenades?

Col. O'HEARN. We have our proving grounds where extensive tests are made.

Mr. ANTHONY. If a citizen should come to you with a device which he deemed of value to the country would his device be properly tested out and carefully examined into by the Ordnance Department?

Col. O'HEARN. It certainly would be carefully examined, and if it showed merit we would be glad to encourage the manufacture and test of it.

Mr. ANTHONY. So the Ordnance Department is organized so that it can receive and test all suggestions of that kind?

Col. O'HEARN. It is. We have tested some 12 different types already.

Mr. GARRETT. The hand grenade you speak of—is that the character of hand grenade they are practicing with at the present time at the various cantonments? Is it about the size of a baseball and cut in various directions?

Col. O'HEARN. Yes, sir.

Mr. GARRETT. Do you think they can throw that 100 yards with their hands?

Col. O'HEARN. A hundred yards was perhaps an overestimate.

Mr. GARRETT. I noticed the men practicing with them, and I think 50 or 60 feet was about as far as they could throw them.

Mr. FIELDS. What is the weight of a hand grenade?

Mr. GARRETT. They weighed 2 or 3 pounds.

Col. O'HEARN. I think they use mechanical devices in the throwing of those grenades.

Mr. GARRETT. I think that they have a stick screwed in the end of the grenade in some way.

Col. O'HEARN. They have various mechanical devices for the purpose of increasing the range.

Mr. GARRETT. I was speaking of the ones they throw with their hands. I understood that they had some kind of a handling device which they used, and, of course, they would get a greater range with that.

Col. O'HEARN. The usual limit of hand-grenade throwing is about 45 yards.

Mr. GARRETT. That would be about 135 feet.

Col. O'HEARN. The rifle grenade then comes in.

Mr. MORIN. The range of the rifle grenade is about 200 yards?

Col. O'HEARN. We have gotten them to nearly 200 yards, as I remember.

Mr. GORDON. On the first page of this statement you have furnished to the committee is an item for offensive gas bombs, \$25,000,000. How many bombs will that purchase?

Col. O'HEARN. The offensive gas-bomb work has not progressed far enough for us to be able to say what type will be ultimately adopted. It is rather a new development.

Mr. GORDON. On the second page you have a similar item of \$50,000,000, and that makes a total of \$75,000,000 which it is proposed to appropriate, without any definite knowledge or suggestion as to what should be done with it other than to develop these offensive gas bombs.

Col. O'HEARN. Yes, sir.

Mr. GORDON. Assuming that those bombs will cost approximately the same as the others——

Col. O'HEARN. They will cost approximately the same, whether we fill them with gas material or explosives.

Mr. GORDON. What will be the average price for each of those bombs?

Col. O'HEARN. You will note that the cost of the other bomb varies from about \$27 to about \$200.

Mr. GORDON. What would you say the average would be for the gas bombs?

Col. O'HEARN. The average will be below rather than above the mean of those two prices. You will note that the mark 2 bomb is

being furnished in considerably greater quantities than any of the others, and that that is the cheapest.

Mr. GORDON. What would you say then would be a fair average price for the bombs for which an appropriation of \$75,000,000 is asked, if you concluded to buy bombs with that amount?

Col. O'HEARN. The estimate would be about \$75.

Mr. GORDON. You estimate that they would cost about \$75 apiece?

Col. O'HEARN. Yes, sir.

Mr. GORDON. Then \$75,000,000 would buy 1,000,000 of those bombs?

Col. O'HEARN. Yes, sir.

Mr. GORDON. And adding that 1,000,000 to the number already estimated for specifically it would make about 8,000,000 bombs?

Col. O'HEARN. Yes, sir.

Mr. FIELDS. How many bombs will one of the standard bomb-dropping machines carry at one time?

Col. O'HEARN. The standard machine will carry about 16 of what we designate as the mark 2 bomb. That is a 25-pound bomb. Probably other machines would carry about the same total weight.

Mr. FIELDS. They can drop bombs as rapidly as they care to?

Col. O'HEARN. The machines have a very simple mechanism by which they can drop the bombs. It is under the eye of the observer.

Mr. McKENZIE. Am I correct in the understanding that the gas bombs are dropped from the flying machines?

Col. O'HEARN. Yes, sir.

Mr. LUNN. I would like to ask how they arrive at the unit cost of the bombs—whether it is done by competitive bidding? Here is the Barlow drop bomb, \$110. If I remember rightly, we ordered 10,000 of those? Were 10,000 of those bombs ordered last spring?

Col. O'HEARN. Ten thousand of those bombs were ordered last spring, I believe. Capt. Ragsdale is familiar with the details of what we are buying.

Mr. LUNN. Have those been finished yet?

Capt. RAGSDALE. Five thousand of them are due on January 1 and 5,000 more on March 1. In addition to those, 3,000 more have been asked for.

Mr. LUNN. What are they charging per unit?

Capt. RAGSDALE. About \$100.

Mr. LUNN. The reason I am asking about those figures is because I do not understand how that cost is arrived at. We simply have to take your judgment in reference to it, and it looks like a tremendous amount of money.

Col. O'HEARN. It represents about what we expect to pay, based on what we are paying, on our best estimate of what we will have, judging from such information as we have.

Mr. LUNN. And the difference between the smaller price and the larger price is the difference of weight and material?

Col. O'HEARN. The difference in weight. The bombs vary in weight from 25 pounds to 500 pounds. We have developed a bomb as heavy as 500 pounds.

Mr. LUNN. Then the \$200 bombs of mark 5 are heavier bombs?

Col. O'HEARN. Five hundred pounds.

Mr. LUNN. What is the weight of the Barlow bomb that has a long sort of shillaleh stick attached to it?

Col. O'HEARN. That weighs 96 pounds.

Mr. LUNN. It seemed to me a very large price to pay; but I am not an ordnance expert, and, of course, I am not familiar with those things. I wanted to get at the point as to whether or not, with those prices, there were tremendous excess profits in the sale of these bombs.

Col. O'HEARN. I think not. It is a class of material which can be made in a considerable variety of shops. I think we are getting good prices.

Mr. ANTHONY. In reference to these bombs, are you buying this material on a cost plus profit basis or at a price fixed by the Government? I am referring to these explosives.

Col. O'HEARN. Capt. Ragsdale tells me everything except the Barlow heavy drop bombs have thus far been ordered on a cost plus basis.

Mr. LUNN. Then the contract for Barlow bombs, the \$34,000,000 contract, is not on a cost plus basis, but on a price fixed by the company?

Col. O'HEARN. We have not yet ordered that quantity of material.

Mr. LUNN. In reference to this estimate given here, calling for a deficiency appropriation, is that a deficiency for September, 1917, to September, 1918?

Col. O'HEARN. That is correct.

Mr. LUNN. Of \$272,000,000?

Col. O'HEARN. Yes.

Mr. LUNN. What is the occasion of that deficiency? In bringing in the estimate here has something happened between the time this estimate was made and the present time that would call for such a tremendous deficiency or is the deficiency practically in this original bill?

Col. O'HEARN. The deficiency arises for the most part from the increase in the expected number of aeroplanes to be in use during this period. It arises to a considerable extent, in addition, from an increase in the stock, or it might be called a reserve, although that is not a good term.

Gen. Pershing has recommended that in lieu of our proposed stock supply between the factory and the front that there should be a much larger accumulation. He has recommended, and this estimate calling for the additional quantities is based upon the provision of one month's supply with the troops, three month's supply in the reservoir in France, one month's supply in transit, and two months' supply in reserve in the United States. That accounts for the greater part of this \$277,000,000, which we need immediately for the placing of orders for this class of material.

Mr. LUNN. Part of this is for the increased number of machines over what you anticipated you would have to provide for?

Col. O'HEARN. Yes, sir.

Mr. LUNN. Is there an expectation on the part of the aviation section that they are going to be able to purchase more machines than they expected?

Col. O'HEARN. Yes, sir.

Mr. LUNN. The budget being submitted, and then so soon after its submission such a deficiency being asked for is astonishing to me,

and I want to find what the reason is for it. We will spend lots of money, and all that is needed, but there is a limit even to the purse of Uncle Sam.

Col. O'HEARN. Capt. Ragsdale tells me that it is only within the past few weeks that the Signal Corps program has advanced to the point where they could predict with reasonable certainty what aeroplanes would be available, and that leads to this increase—that comes with the increase of the stock to insure a supply at the firing line when needed.

Mr. LUNN. Then all these bombs in these estimates, except the Barlow drop bomb, are purchased on a cost-plus basis?

Col. O'HEARN. The orders thus far placed.

Mr. LUNN. What is the percentage of profit you allow?

Col. O'HEARN. The contracts thus far placed have been in general on a basis of cost plus 15 per cent.

Mr. LUNN. May I ask this question: Is there any allowance in the cost for interest on capital invested? How do you arrive at the cost? The question was raised in some way, where there unfortunately had been allowed, under cost, a certain percentage for capital invested, and instead of 15 per cent profit it would be practically the Government guaranteeing them a great deal more than they could possibly be guaranteed under a private contract.

Col. O'HEARN. It is my understanding that the cost does not include interest on capital invested. It is something that has been prescribed in a standard form of contract by our legal department, with which, personally, I am not very familiar. I am the head of the design work, and after we have prepared our designs and indicated what quantities are needed the matter is passed to the purchase section, which section negotiates the purchase and the terms of the contract.

Mr. LUNN. Mr. Chairman, is there some way in which we could have the matter before us? Where we are passing upon these appropriations for so many millions of dollars' worth of material to be purchased on a cost plus 15 per cent basis, it seems to me we should have some information as to whether, in addition to that 15 per cent, these men get a percentage on their capital invested. Could we not have that information furnished?

Col. O'HEARN. I will be glad to put in the hearings more definite and accurate information on that point. That is a matter that is not handled by me directly.

Mr. LUNN. If you get that information and put it in the record, I will very greatly appreciate it.

NOTE.—The purchase section advises that in no contracts so far let for drop bombs have features been embodied whereby the contractor receives a percentage on the capital invested. I further understand that this is the general rule in negotiating contracts.

Mr. DAVIDSON. Are all those bombs that are dropped from aeroplanes concussion bombs or fuse bombs?

Col. O'HEARN. They are all concussion bombs, I would say.

The CHAIRMAN. Col. Thompson, there is just one more item we want to inquire about, and that is at the top of page 63:

Manufacture of arms: For manufacturing, repairing, procuring, and issuing arms at the national armories, \$50,000,000.

Col. THOMPSON. That is for manufacturing, procuring, repairing, and issuing arms, manufacturing at the Springfield Armory and

the Rock Island Arsenal, and purchasing from the plants outside. It also includes automatic pistols, spare parts for reserve, bayonets, sabers, and spare parts for the rifles, and overhauling and cleaning these articles.

In this estimate we also have to provide for the small arms for the Army, Navy, and the Marine Corps, and also incidentally for pretty nearly all the authorized military organizations that are gotten up in the United States, like the United States Guards, which they are proposing to call out; for any reorganization of the National Guard; for all State and home guards; for certain military schools; National Rifle Association; arms issued to other departments for the protection of Government property; and for large working and actual reserves of arms in the United States and outlying possessions. It involves a considerably larger number of guns that are actually used in the Army itself, and this is the explanation why this appropriation is not limited in its purposes to any fixed number of men.

The last appropriation that was submitted for this purpose was in the act of October 6, 1917. That was submitted to piece out the rifles for 2,300,000 men and for the other authorized purposes just mentioned. There was submitted an estimate of \$32,690,000 for these purposes, but it was reduced to half that amount in the act.

The CHAIRMAN. You got more money under this item last year than you are asking for this year?

Col. THOMPSON. We are really asking for a reserve supply of rifles for more than 2,300,000 men, as I will show you a little later.

Out of that amount of money that was asked for under the act of October 6, 1917, we got about \$16,695,000; but the urgent deficiency act of October 6, 1916, contains the following:

Manufacture of arms: For manufacturing, repairing, procuring, and issuing of arms, \$16,695,000: *Provided*, That the Chief of Ordnance of the United States Army is authorized to enter into contracts for \$16,000,000 in addition to the appropriations herein and hereafter made.

It has been necessary, on account of the necessities arising abroad and in this country, to fully utilize that \$16,000,000 authorization. We have constantly new requirements as to the number of telescopic sights and attachments by which the soldiers can fire without exposing their heads over the parapet, such as periscopes and many new devices.

To give the committee full information about this matter, the total number of rifles on hand and ordered is 2,370,000. This estimate is for 985,000 rifles, making a total of 3,355,000; and if we take that, less a third allowed for wastage for one year, we would deduct 1,118,333, leaving 2,236,667 rifles that would remain at the end of the year for which this amount is appropriated; and adding one-half the number of men more that could be served by the number of rifles, since only 66 $\frac{2}{3}$ per cent of the men carry a rifle, we would have rifles for an army of 3,355,000 men. But, as previously explained, a large number of rifles is required for the Navy, Marine Corps, and other men not included in the field or other armies of the United States.

That is a large number, and I desire to say, with reference to rifle making, that this is, in my opinion, the most difficult kind of munitions to manufacture. It takes more time and requires greater precision to make a rifle than to make a big gun. It takes a greater

number of gauges to make a rifle than to make a big gun, and therefore we deem it best to give information of this character to the committee, so that they may determine what is best to be done. The same remark applies to a great extent to cartridges. We have not the capacity for making them that we have for rifle making.

Mr. TILSON. As to the causes of the great wastage of rifles before you actually reach the battle line, what would you say about that?

Col. THOMPSON. I suppose it is due to the fact that the men leave on certain duties not requiring the use of a rifle, or get ill and go to the hospital, and the rifles may not be properly cared for. The greatest wastage is when the men are retreating.

Mr. TILSON. What would you say about the wastage due to the handling of the rifles by green members of the National Guard, etc.?

Col. THOMPSON. In regard to that, it is estimated that there is a loss of some millions of dollars, due to the mistreatment of the rifles or in not taking care of them by any body of partially trained or untrained soldiers in any country.

Mr. TILSON. And there is great difficulty in taking care of them?

Col. THOMPSON. Yes, sir. A civilian told me recently that, in passing through a camp not long ago where there were some Regulars, he saw some of the rifles suspended under cots, which showed the men were taking good care of them, and he saw other rifles on the ground, with the muzzles exposed outside the tent. Great care must be taken of a rifle.

Mr. ANTHONY. Can not these minor injuries to rifles in the training camps be repaired at the camps?

Col. THOMPSON. To a great extent.

Mr. TILSON. But when they affect the inside of the barrel, it is vital.

Col. THOMPSON. Getting the barrel rusty is vital, and it is almost impracticable to make repairs at the camps which require replacing the barrel.

Mr. TILSON. Why it is not practicable, from an economic standpoint, without decreasing the value of the service at all, to have a training rifle? I showed you one the other morning in my office, I think, a perfect reproduction of the Springfield rifle, including the mechanism of the bolt, of the snapping of the trigger, and yet not a rifle at all. But for all the earlier stages of the training of the troops it would be absolutely equal to the rifle itself. I would like to get your opinion, as a practical rifleman, as to the probable economy in using such a rifle as that.

Col. THOMPSON. The matter, of course, has been seriously considered—

Mr. NICHOLS. What would a rifle like that cost?

Mr. TILSON. That would cost five or six dollars.

Col. THOMPSON. This matter has been very seriously considered in the department, especially with the temporary shortage of arms in mind. But with the Krag rifle, to the amount of 170,000 on hand for training purposes, the department decided that that would be sufficient. I think, personally, the general idea is a good one.

Mr. TILSON. But all the earlier stages of training of recruits and the training of boys in the schools, it would be as useful as any rifle until the recruit reaches the stage when he understands the mechanism of the rifle.

Col. THOMPSON. That is true.

Mr. GREENE. Is there not another factor entering into that which may make it of doubtful value? If you are going to train a soldier so that he will have practical understanding of the care of his rifle, will you not have difficulty in doing that if you do not use a regular rifle from the beginning? If you let a man go along, and he is not habituated to the use and care of a regular rifle, but is habituated to the use and care of this gun with which Col. Tilson refers to, will you not have a great difficulty to overcome?

Col. THOMPSON. It is expected that we will have enough rifles to arm the troops in a few weeks.

Mr. SHALLENBERGER. Will you give me the figures in regard to the number we have now?

Col. THOMPSON. We have a total on hand now and ordered of 2,370,000.

Mr. SHALLENBERGER. How many service rifles have you on hand now?

Col. THOMPSON. We have on hand now over 1,000,000 rifles, and they are coming in at a rapid rate—at the rate of about 40,000 a week.

Mr. SHALLENBERGER. This money you are asking for is to be used in manufacturing in the arsenals. Have you any figures to show about what it has cost to manufacture the Springfield rifle in the arsenals—what it costs at the present time?

Col. THOMPSON. The arsenals are just getting fully started and settled down as to matters of that kind, because of the various changes and increases of product. We are now allotting to the arsenals \$25 per rifle.

Mr. SHALLENBERGER. In your estimate as to the number of rifles you are going to produce that includes those that you are going to purchase from private manufacturers as well as those you are going to get from the arsenals. How many do you expect to produce in the arsenals?

Col. THOMPSON. 415,000 in the arsenals.

Mr. SHALLENBERGER. You expect to produce that number before this money is expended?

Col. THOMPSON. Yes, sir; and get 570,000 by purchase. We fill up the armories to their capacity first.

Mr. SHALLENBERGER. Can you tell us about what the model of 1917 is costing us—the modified Enfield rifle?

Col. THOMPSON. No, sir; I can not now, because we are just getting at the point where that matter is getting straightened out.

Mr. SHALLENBERGER. Is it not something like \$50?

Col. THOMPSON. No, sir; it will be nothing at all like that.

Mr. SHALLENBERGER. Will it not be about \$40?

Col. THOMPSON. No, sir; it is dangerous to make a prediction about matters of that kind.

Mr. SHALLENBERGER. You have not been able to make a direct contract; it is all done on the cost-plus basis?

Col. THOMPSON. It is for rifles.

Mr. SHALLENBERGER. In the hearings on the 1917 bill Gen. Crozier said in making 21,000 rifles the cost was \$16.25 a rifle at that time.

Col. THOMPSON. That was our old cost.

Mr. SHALLENBERGER. This is a matter concerning which I wanted to get confirmation from you, because it enters into the cost of this rifle, and we shall probably have considerable discussion about it.

When the question of the manufacture of this rifle was up about a year ago I made a speech on the floor of the House in which I called attention to the small number being manufactured. Later a luncheon was given here in the Speaker's room at the Capitol, and Mr. Vauclain, of the Baldwin Locomotive Works, was there, and he gave us quite a little talk in reference to the problems in the manufacture of rifles. The question arose during this discussion, in which the Speaker and others engaged, as to whether or not we could purchase the rifle. Mr. Vauclain was there, and he told us we could purchase the rifles through private manufacturers.

During the course of that discussion Mr. Vauclain spoke of the troubles the manufacturers were having in producing rifles for foreign Governments, and, as I recall the discussion, he said you had gone there to have superintendence of the manufacture of the rifles. That was right, was it not?

Col. THOMPSON. No, sir; I went there as consulting engineer.

Mr. SHALLENBERGER. He quoted you at any rate. The cost of the rifle was then something like \$30, and that, he said, proved too cheap, and a statement was made something like this, that you had told them that the Government was manufacturing the rifles for \$9.50, and they said: "Surely we can make them for \$15 apiece; and if we charge these other fellows \$30 for them, we can make plenty of money."

Of course, that statement that the Government had made them for \$9.50 was something that we did not know about; it was a cheaper price than any of us had known about and I was wondering whether that was a correct statement.

Col. THOMPSON. It can only involve two factors, the material and the direct labor.

Mr. SHALLENBERGER. Not the full cost of the rifle?

Col. THOMPSON. No, sir.

Mr. SHALLENBERGER. I asked afterwards who you were, and Mr. Kahn told me you had the same position that Col. Babbitt had. I therefore considered that you were an authority, and I was anxious to get your explanation of those things.

Col. THOMPSON. That price involved only those two items—the material and the direct labor.

Mr. ANTHONY. What is the lowest cost at which the Government turned out Springfield rifles before the war?

Col. THOMPSON. During one year we claimed a cost of \$12.60.

Mr. ANTHONY. That included everything entering into it?

Col. THOMPSON. Yes, sir; but I was rather doubtful as to that price myself.

Mr. ANTHONY. What would be your idea of the present cost?

Col. THOMPSON. The present cost of the rifle?

Mr. ANTHONY. Yes; those that are coming out now from the Springfield Armory.

Col. THOMPSON. As I just stated, the allotment price that we give them is \$25 per rifle, but during recent months the Government armories have been coming back for more money on various allotments.

Mr. ANTHONY. You think it would be more than that, then?

Col. THOMPSON. I would rather say it will be about that.

Mr. GREENE. In that connection, Colonel, is it possible to determine the actual cost of the production of a Government rifle with the same precision and certainty that a commercial or industrial concern can determine the cost of a similar article?

Col. THOMPSON. No, sir.

Mr. GREENE. The overhead charge for Government production of any kind can be figured on varying lines of detail. Some people will figure in certain things which pertain to the rifle and others will regard those things as excluded. If you chop off a certain part of the overhead and increase the number of officers engaged in the ordnance work, the overhead for each rifle is increased, and there is no way to determine what that is.

Col. THOMPSON. We operate under so many different appropriations. If we have a boiler repair that is going to cost, say \$3,000, we may get that in a special appropriation, including that item from another committee. That boiler repair may put that boiler in good shape for three or more years. Should it be charged to the cost of the rifle or not? I will admit the determination of exact governmental cost is a very difficult proposition.

Mr. GREENE. The commercial house, having one pocket and one central head, may reduce all expenses, and may be able to determine them accurately, because there is but one source of receipts and one outlet. But you have to utilize all the varying factors of overhead, and it is distributed through all the various functions of the service and is appropriated for by various committees and operating in plants under dissimilar conditions.

Col. THOMPSON. Yes, sir.

Mr. SHALLENBERGER. This item also includes the manufacture of pistols.

Col. THOMPSON. Yes, sir; the manufacture of pistols, of bolos, and spare parts for the same, and any kind of side arms, and anything that is attached to the rifle, such as a telescope or a periscope.

Mr. NICHOLLS. Did you say that provides for bolos?

Col. THOMPSON. Yes, sir.

Mr. NICHOLLS. What is a bolo?

Col. THOMPSON. It is a short bayonet or knife that comes from our service in the Philippines.

Mr. NICHOLLS. A curved steel blade?

Col. THOMPSON. The back may be straight, but the front is curved, more or less, like a meat knife.

Mr. SHALLENBERGER. Have you got enough pistols to supply the troops?

Col. THOMPSON. No, sir; we are very short on pistols, and it is a matter of gravest concern.

Mr. SHALLENBERGER. Do you think this is enough to supply us with all the pistols we need?

Col. THOMPSON. This money, with what we have, will supply pistols for about 2,000,000 men.

Mr. SHALLENBERGER. Does every man carry a pistol?

Col. THOMPSON. No, sir; 40 per cent of the men carry pistols.

Mr. SHALLENBERGER. I was told by the father of an officer who was about to start for Europe that the officer could not secure a pistol.

Col. THOMPSON. We are using the pistol or the revolver, and they are both firing the same cartridge.

Mr. SHALLENBERGER. Are all the pistols of one caliber—.45?

Col. THOMPSON. Yes, sir.

Mr. SHALLENBERGER. Is the revolver caliber .45?

Col. THOMPSON. Yes, sir.

Mr. SHALLENBERGER. You had some of caliber .38?

Col. THOMPSON. We had some of caliber .38, and the foreign pistols are caliber .30.

Mr. SHALLENBERGER. Do you shoot a bullet and use black powder, or do you use a jacketed bullet?

Col. THOMPSON. We use the same jacketed bullet for both revolver and pistol. It shoots with the smokeless powder.

Mr. SHALLENBERGER. You have the steel-jacketed bullet with the .45s?

Col. THOMPSON. No, sir; we do not use the steel bullet, but a cupro-nickel jacket, with a lead core.

Mr. TILSON. You were using the older Colt model, and then the new one that shoots with the clip of three?

Col. THOMPSON. Yes, sir. We are using the automatic pistol of the model of 1911 and the revolver of the model of 1909. They are both late models of their kind, and the cartridge is one of the most effective pistol cartridges in existence.

Mr. GREENE. The old six-shot revolver?

Col. THOMPSON. In a simpler and more durable model. I have received information from the division concerned in the Ordnance office that the machine-gun sight is graduated up to 3,000 yards.

(Thereupon the committee adjourned, subject to the call of the chairman.)

HOUSE OF REPRESENTATIVES,
COMMITTEE ON MILITARY AFFAIRS,
Friday, January 4, 1918.

The committee met at 10.30 o'clock a. m., Hon. S. Hubert Dent, jr. (chairman), presiding.

STATEMENT OF LIEUT. COL. J. H. RICE, ORDNANCE DEPARTMENT.

The CHAIRMAN. Colonel, there are only two items in the bill in which you are especially interested, and the first is for automatic machine rifles. You are asking for \$237,144,000, and last year you had \$291,177,000.

Col. RICE. Yes, sir; that is correct—for the Regular Army. We also had \$2,500,000 for the Militia. The amount asked for, Mr. Chairman, is made up of two principal items, one is the necessary appropriation of cash to meet the contract authorization of the act of October 6, 1917, of \$118,020,000. The other is made up of the maintenance items for the number of guns we expect to have available and for use, either entirely or partly, during the year 1919, and amounts to \$119,123,892. The maintenance item is figured at certain percentages of the cost of the original equipment, depending upon the type of gun. For the heavy type we figure 40 per cent, and for the light type 60 per cent per annum. For what we call the fixed aviation type, which is the gun which synchronizes with the propeller in the aviation service, we figure 40 per cent, and for the flexible aviation type, which is the gun used by men in the airplanes, 60 per cent; for special automatic rifles, which are really a hand arm, almost, and which are expected to be supplied to aviators for last, desperate use—it is a small automatic or semiautomatic gun carried in the aeroplane at the aviator's right hand, so that if that is the last thing he has left he can use it—we figure for that type 20 per cent for maintenance; and also 20 per cent for maintenance of fire-control accessories, and 30 per cent for automatic 1-pounders, which are used by the Infantry organizations, and also used somewhat for antiaircraft firing on the ground.

Since the last appropriation was made by this committee there have been a very large number of guns ordered, mainly from deficiency appropriations handled by the Appropriations Committee. We have something like 221,000 guns of all types now under manufacture. They include the Colt of the old type, a modified Colt, which is called the Marlin aircraft, the Lewis, the Browning light and heavy, the French Hotchkiss gun, the French Chauchat—which is practically an automatic rifle, a very light hand arm which is used by firing from the hip as the troops advance—and the Vickers.

The CHAIRMAN. How much time do you figure will be required to finish the manufacture of those guns?

Col. RICE. To finish all of them?

The CHAIRMAN. Yes, sir.

Col. RICE. Some of the contracts will be running into this time next year. We are getting considerable deliveries even now. We are getting from 500 to 750 Vickers a month. The Navy and ourselves together are getting about 1,500 or 1,600 Lewis guns a month, and very shortly we will be getting from 4,000 to 5,000 Marlin aircraft guns a month. We are getting the French guns as fast as we can use them. Pending the completion in sufficient quantities of the types of guns they want to arm the foot troops with in Europe, which are primarily either the Vickers or the heavy Browning for machine-gun companies and the light Browning for Infantry organizations. Gen. Pershing is securing from the French the heavy Hotchkiss gun, which is the arm of the entire French Army, and a light gun, called the Chauchat, which is the one also which the infantry of the French Army is using. They were quite anxious to let us have the guns, especially the Chauchat. They have tremendous capacity in the country. It was developed for original equipment, and their army has reached its peak and has been fully equipped, and all they have to do now is to provide replacement, which is nothing like as heavy as the original equipment, and therefore they have surplus capacity. Of the Chauchat guns about 17,000 are chambered for French ammunition, as an emergency measure, but we also undertook to chamber 25,000 of them for American ammunition, which they are doing over there, with some expert assistants whom we have sent, and those 25,000 ought to begin to come along pretty soon. Then, of course, as fast as we get those we will retire the French Chauchat and probably use them for training purposes.

The CHAIRMAN. Is it not a fact that the reason our troops in France have been equipped by our allies is due to the fact they had a surplus of arms over there, and we considered it would be cheaper and more advantageous for our troops to use their surplus arms rather than to manufacture and ship them across the water to the troops?

Col. RICE. In certain lines of manufacture both the English and the French Governments have been very desirous of having us order from them. We have, of course, needed equipment quicker than it was practicable to get it in this country, so that we have also been interested; but of the light machine guns, for instance, they have surplus capacity which they are very anxious to have used, and so have proposed to us that we order the Chauchat rifle from them, not only because our troops needed them, but because they would like to have their capacity in employment. The same thing holds along certain lines about field artillery and other equipment. It is a fact that our allies are not stinting themselves because of the things they have given us.

Mr. GREENE. It might be proper to ask if that is not because of the fact that during three years of fighting they have attained their own maximum of production, both as to kind and extent, so that they are now only called upon to supply wastage and similar needs?

Col. RICE. That is a fact; yes, sir.

Mr. KAHN. I heard it stated publicly by a gentleman connected with the munitions board of the English that they have only been receiving 8 per cent of the firearms and matériel that they required for their forces from the United States; that the other 92 per cent they were manufacturing in their own country and getting elsewhere. Do you know anything about that?

Col. RICE. I do not know the exact percentages, but I am certain that the greater part of the munitions have been manufactured in England for England; that our contribution has not been so very great relatively.

Mr. TILSON. Has it not been unequal, and in some lines we have furnished a considerable percentage, whereas in other lines the percentage would be quite small? For instance, we have furnished a very small percentage of heavy artillery, so that while that percentage might be exactly correct it might be misleading as to some particular items.

Col. RICE. That would necessarily be so as a manufacturing proposition. They would order here certain lines only and limit them as much as possible, and order in as large quantities as possible.

Mr. KAHN. But of heavy matériel I was informed they have only been getting about 8 per cent of the supply which they required from the United States.

Col. RICE. I should think that might readily be so.

The CHAIRMAN. Colonel, you may proceed with your detailed statement.

Col. RICE. I do not know, Mr. Chairman, whether you have had a statement in reference to the Browning gun, but I think not, and I may tell you, supplementing what was stated at the hearings less than a year ago, that the board which was appointed to test machine guns in May of last year tested all those presented, of which there were a considerable number, and recommended certain guns as serviceable, and particularly recommended certain of these guns. The guns particularly recommended were the light and heavy Browning, both invented by Mr. John Browning, who is undoubtedly the greatest automatic arms inventor in the world, and both, but particularly the heavy gun, passed a test which, as far as my knowledge goes, is practically unprecedented. They fired 20,000 rounds with it from the beginning practically without a jam or a malfunction or a broken part, and they fired 20,000 more and got one broken sear on about the thirty-ninth thousandth round, so it was pretty nearly a 100 per cent performance. That, of course, was only one gun. We also fired 20,000 rounds with another gun of the same type and there were, I think, two breakages due to misuse of the gun.

The CHAIRMAN. You mean another Browning?

Col. RICE. Another Browning of the same type. When the report came to the Ordnance Office we were not quite willing to accept the one gun alone with such an unusual performance, so we requested that they fire also the other gun. We knew they had two guns. The performance of that gun was almost equal.

Mr. KAHN. What is a sear?

Col. RICE. The trigger releases the sear, which releases the firing pin or bolt.

Mr. LUNN. What is the life of one of those guns? How many rounds is it supposed to fire before it is practically ready for repair or ready for the scrap heap?

Col. RICE. The barrel, of course, is the thing that wears out pretty definitely, and on a water-cooled gun that ought to last 15,000 or 20,000 rounds.

Mr. LUNN. The reason I asked the question is because you said they fired 20,000 rounds. Would that exhaust the function ability of the gun?

Col. RICE. Oh, no; the number of rounds is determined merely to give what would be considered a very severe test. If the guns are kept in proper repair they will shoot more than 100,000 rounds.

Mr. KAHN. How are the cartridges fed into the gun, from a revolving wheel or belt?

Col. RICE. From a belt. If you have ever seen a Vickers gun, you will find that the heavy Browning looks very similar to it, although the mechanism is entirely different. It is the same type of gun; that is, it has the barrel recoil, the barrel moves to the rear bodily in functioning the mechanism, and it has a belt feed, and correspondingly, of course, it is water-cooled, and correspondingly, it fires a great number of cartridges at one burst, if you want it to, because the belt holds 200 or 500 or 1,000 rounds, according to the way you make the belt, whereas with the drum feeds, they are, of course, limited because of the weight and size. The light Browning gun is a gas-operated gun, intended only to fire a limited number of rounds at one burst, the magazine carrying 20 rounds. Of course it did not pass such a remarkable test as the heavy gun, because that type of gun never can. It is too light. It only weighs 16 pounds all told. But, nevertheless, it passed a very successful test and was highly recommended by the board. The board also recommended as a serviceable and desirable gun the Lewis, and they recommended, less enthusiastically, of course, the old Colt, which is practically obsolescent.

Mr. KAHN. How many shots a minute will the Browning fire?

Col. RICE. The light gun will fire about 400, the heavy about 600 a minute.

Mr. KAHN. And what is the capacity of the Lewis gun in that regard?

Col. RICE. The Lewis fires about 500 shots a minute. We would rather the Browning did not shoot quite so many as it does. The number of shots is normally a question of the type of mechanism more than anything else, and if they fire anywhere from 200 rounds up for any ordinary use, we do not criticize it.

Mr. TILSON. Colonel, after all is it not largely a matter of cooling? The barrel gets so extremely hot it is impossible to use it after a large number of shots are fired rapidly, anyway; is not that the fact?

Col. RICE. That is correct.

Mr. TILSON. So that the mere fact of a gun firing 600 shots a minute or 300 shots a minute is not really as important as it sounds?

Col. RICE. No.

Mr. GREENE. That maximum is never practically effected anyway, as a matter of actual employment?

Col. RICE. The only case in which a very high rate of fire is a desirable thing—and when I say a very high rate of fire I mean something over 400 rounds per minute—is in the aircraft service, where they have only a second or two in which to use the gun, and the volume of fire is of great importance. In all other situations we think that anything over 400 is rather a disadvantage than otherwise; at least it is not a thing we would work for.

The CHAIRMAN. What about the capacity for the manufacture of these Browning guns?

Col. RICE. Fifty-five thousand of the heavy Browning, and the aviation Browning, which is a slight modification of the heavy Browning, are under manufacture in four different plants. We have 57,000 of the light Browning under manufacture in three different plants, and as soon as we can get a definite statement from a manufacturer we are going to order 20,000 more from one of them, which will make 77,000. We hope to get all of those guns within a year.

The CHAIRMAN. Within a year from now or within a year from the time of making the contract?

Col. RICE. From now. Some of the deliveries will begin to come through in February or March on the light guns, and they will probably begin to come through in May on the heavy guns.

The CHAIRMAN. And after they begin to come through, about how many guns do you expect to receive a month?

Col. RICE. We expect to get in May of the heavy Brownings 300, in June, 1,100; in July, 2,000; in August, 3,200; in September, 6,000; in October, 8,000; in November, 9,500; in December, 9,500; and we can go on at that rate indefinitely and can increase it if we try. In these plants we have not loaded them up to their full capacity as yet. We expect to be able to expand them in their production when they can get out of the experimental stage as far as concerns their jigs, tools, fixtures, and so on, and when they get a real start on production they can doubtless do more than we have given them.

The CHAIRMAN. Then, under the present appropriation and under the contracts now existing, you will run for six months during the next fiscal year?

Col. RICE. Yes, sir.

The CHAIRMAN. Six months into the next fiscal year?

Col. RICE. Yes, sir; but not at full capacity.

The CHAIRMAN. So that the appropriation you are now asking for will not be necessary until about six months after the next fiscal year begins?

Col. RICE. That may turn out to be the case, but I think under present conditions it would be a little bit dangerous to try to be sure of that. We have a little capacity, in fact considerable capacity, in one plant which has not yet been taken up. The demand from abroad for certain types only of machine guns, for instance the Vickers, is quite considerable. We furnished the French with 1,000 Vickers in place of 1,000 Hotchkiss which they gave us, because the Vickers will synchronize and the Hotchkiss will not. The same thing holds with the heavy Browning. The Browning and the Marlin aircraft will both synchronize. Therefore we may have some demand from over there for help along that line.

Mr. KAHN. What gun which will synchronize have they been using in their aircraft?

Col. RICE. The Vickers; and the supply of Vickers that can be produced abroad is very inadequate. The Vickers gun is a very difficult gun to manufacture, and there has been what pretty nearly amounts to a failure in the matter of production both in England and in this country, to meet the needs on that account; and that is one reason we are very anxious to get the Browning gun in the service, because it can be manufactured so much quicker and so much cheaper, and it gives every promise of being as good or perhaps a better gun.

The CHAIRMAN. I understand you to say that there are now under manufacture 221,000 guns of all types.

Col. RICE. A good many of those are being produced in France, of course.

The CHAIRMAN. Yes; but for our forces, 221,000 guns, which you expect to have within the next 12 months.

Col. RICE. Yes.

The CHAIRMAN. What size army will that many machine guns supply?

Col. RICE. That was really figured for 1,500,000 men.

The CHAIRMAN. In other words, can you give us the figures as to the number of guns per thousand men, or put in the record?

Col. RICE. Yes, sir; it is about 147 per thousand; but this total covers not only the guns which are put into the hands of the troops directly but allows a 50 per cent wastage in heavy guns, and it allows 100 per cent wastage in the light guns, and it allows a very large number for aviation, and that number increases daily, so that we can not really give a definite figure. The aviation service, as you know, is building all the airplanes they can, and their expectations as to what they can build increase daily, and they consequently demand increasing guns daily. Therefore the total number is not a direct computation of the number of guns needed for the troops that operate on the land.

Mr. LUNN. Colonel, you say that you receive from the Aviation Department increasing demands daily. Is it not reasonable to inquire whether or not the Aviation Department can not know approximately how many machines they are going to build this year? They can not change it every day, or if they change it every day where are we ever going to get anything definite in the way of the number of guns needed for the aeroplanes? If they come in to-day and say they are going to build 10,000 and to-morrow come in and say they are going to have 14,000 and the next day 16,000, how can you ever be able to get anywhere toward a definite production and escape the possibility of making too many of one particular type of gun when that time might be used to better advantage in producing something else?

Col. RICE. Of course, my statement that it changes daily is a little excessive.

Mr. LUNN. I realize that, but even if it changes every month.

Col. RICE. What I mean to say is that it is not a definite and fixed program in the aviation work, and I do not think it ever can be.

Mr. LUNN. It can not be fixed, but it can be approximated; otherwise they will never get anywhere.

The CHAIRMAN. I think the question of the number of guns which they are going to use would be a matter for the Signal Corps to tell us about. The Ordnance Department simply furnishes, as I understand it, what they request. Is not that true, Colonel?

Col. RICE. Yes.

Mr. LUNN. I understand that, and I am asking him how he can get anywhere toward supplying that demand unless they give him an approximate statement of what they need for at least three months.

The CHAIRMAN. Do they not do something like that?

Col. RICE. Yes; we have statements from them, and the intervals are not shorter than three months. Perhaps I exaggerated my statement in the first place. But I think it might readily happen that it would change at any time. I do not see how under war conditions it can be expected to stay fixed. The only thing in regard to machine guns which is fixed is that we are going to have difficulty, no matter what we do, in getting enough.

The CHAIRMAN. Colonel, have you expended and contracted for the total sum appropriated last year of \$291,000,000?

Col. RICE. No, sir.

The CHAIRMAN. How much have you left?

Col. RICE. We have obligations outstanding of \$162,856,089.29.

The CHAIRMAN. That is the total outstanding obligation?

Col. RICE. Yes, sir; since April 1.

Mr. KAHN. Then you have an available balance of practically \$129,000,000?

Mr. TILSON. With six months yet to run.

Col. RICE. We are obligating the money very rapidly now.

The CHAIRMAN. Will you tell the committee where the plants are located and who the people are who are manufacturing these guns?

Col. RICE. The Colt Patent Fire Arms Manufacturing Co. is operating on this work two plants, one which they have bought since the last time we were here, which is a plant at Meriden, Conn., and their own plant at Hartford, Conn. They are manufacturing about 12,000 Vickers guns, which they have under contract, 10,000 heavy Brownings, and 12,000 light Brownings. The Remington Arms Union Metallic Cartridge Co., at Bridgeport, has orders for 15,000 heavy Brownings. The Marlin Rockwell Corporation, at New Haven, has orders for 23,000 aircraft Marlin guns, which are practically the old Colt type, with a modification, and 20,000 light Brownings, which are to be manufactured in a plant at Norwich, Conn., control of which they have acquired from the old Hopkins & Allen Arms Co. The Winchester Repeating Arms Co. has an order for 25,000 light Brownings and will probably get an increase in their order shortly. The New England Westinghouse Co. has an order in process of being placed for 15,000 heavy Brownings.

Mr. TILSON. Is that the Springfield plant?

Col. RICE. At Springfield and the adjoining suburbs. The Lewis gun is being manufactured at the works of the Savage Arms Co., their total orders for the Ordnance Department being about 42,000.

Mr. KAHN. Where are they located?

Col. RICE. At Utica, N. Y.

Mr. SHALLENBERGER. Is that all in one factory?

Col. RICE. That is the Savage Arms Co., and they have one plant. That covers the entire list.

The CHAIRMAN. What is the cost of each of those guns?

Col. RICE. The heavy Browning is being placed at \$600 for the gun alone, with certain spare parts, tools, and accessories in limited quantity, and the light Browning at \$280, under the same conditions. That is not a fixed price, because the contract has been written with a proviso that we shall have expert accountants go over their books and find out what their costs are, what amortization should be allowed or has been included in the original price which might be

dropped on future orders, and the second part of the contract is to be adjusted accordingly. Therefore we do not know as a fixed quantity what the price is, but those I have given you are maximum prices.

Mr. KAHN. Is there a tripod?

Col. RICE. There is a tripod for the heavy gun.

Mr. KAHN. How much do they ask for the tripod?

Col. RICE. We are not ordering it from them. We are not buying the tripod from these arms manufacturers at all. We want them to put all their energy on the guns. We are going to get them outside, and we have not yet got a price on the tripods. On the Vickers gun the tripod is costing \$165.

Mr. KAHN. I remember when we had one gun before us here the tripod seemed to cost almost as much as the gun.

The CHAIRMAN. You gave us the price of the heavy and light Browning; will you give also the cost of the other guns which you are ordering?

Col. RICE. Yes, sir. The Lewis gun is costing us \$560 without royalties. That also is a case of checking by experts of what their costs are and making adjustments for certain amortization of plant which if necessary shall be dropped. The future guns, when that has been accomplished, will undoubtedly be at a lower price. On some of the guns which we are still to get from them the price negotiation is not absolutely closed. In the royalty matter, on the Lewis gun I might say that the Savage Arms Co. has a contract with the Automatic Arms Co. of Cleveland, Ohio, who are the owners of the patent. The patents are not all owned by Col. Lewis, whose name is connected with the gun. He owns 43 per cent, according to his own testimony. One hundred dollars royalty, with large royalties also on spare parts, was perhaps a reasonable enough figure on the quantities of guns which were being delivered before this war started, but the War Department and the War Industries Board both felt that that ran into such tremendous sums on the orders we were placing for Lewis guns, that it ought not to be paid without investigation. So that there have been negotiations pending for the payment of a lump sum on all the guns secured by the Army and the Navy in lieu of that \$100 per gun royalty, and a corresponding royalty on the parts, which is expected to very largely decrease the total payments on that account. Those negotiations have been conducted by the War Industries Board and they are not yet completed.

The CHAIRMAN. Do you mean that that \$100 royalty applies to each gun?

Col. RICE. Yes, sir.

The CHAIRMAN. And that is what you have been paying?

Col. RICE. We did not pay it directly, but it was included in the price of the earlier guns.

The CHAIRMAN. Was a \$100 royalty included in the price of \$600 for the heavy Browning gun?

Col. RICE. That does not include the royalty, no, sir; but it does include the tripod. Mr. Browning's royalty on the heavy guns was to have been \$50 a gun. We have up with those people the same proposition, except that it has come to an agreement, which is, that

the royalty to be paid on the light gun shall be a fixed sum of \$1,000,000 to the Colt Co., and \$1,250,000 to the owners of the patents. The Colt Co. control the patents and pay royalties to the Browning people, who own them. The royalty agreement or contract which they had between Colt and Browning, and which has been in existence for many years, although recently modified, calls for the payment of \$25 a gun for the light gun and \$50 a gun for the heavy gun, which would have run into very large amounts relatively, if that contract was recognized by the Government.

Mr. KAHN. If Col. Lewis owns 43 per cent of the stock of the company which is manufacturing his gun, and he offers to return the royalties on his stock to the Government, you could cut down the royalty of \$100 to \$57 at the very beginning?

Col. RICE. Yes, sir.

Mr. KAHN. You could start out anyhow with that much reduction?

Col. RICE. Yes, sir; if he does that.

Mr. KAHN. I understand he has offered to do that.

Col. RICE. I think he has, as a matter of fact. He has not made that offer to the Ordnance Department, but I understand he has made some such offer to the War Industries Board, and that it probably will become a part of the agreement which is being discussed between the War Industries Board and the Savage Arms Co.

Mr. KAHN. In this matter of royalties, has your department taken up the question, or has the War Industries Board taken it up?

Col. RICE. The original negotiations have been conducted by the War Industries Board. They come to the Secretary of War and the Chief of Ordnance for approval, of course.

Mr. KAHN. Who constitute that board at the present time?

Col. RICE. You mean in reference to machine guns?

Mr. KAHN. No; the War Industries Board.

Col. RICE. Mr. Willard is chairman, Mr. Baruch is a member, Mr. Brookings, Admiral Fletcher, Col. Pierce, and Judge Lovett. Those are the people I have come in contact with. I am not sure whether there is any other member or not.

The CHAIRMAN. You may proceed with your detailed statement, if you have not finished.

Col. RICE. I have finished that, sir, except I should like to ask that a provision be put in the bill both in regard to this item and in regard to armored cars, which shall extend for another year the appropriations which may be unexpended under those headings on June 30 next. Under the appropriations as made now, unexpended balances revert to the Treasury on June 30.

(The provision referred to follows:)

Provided, That the balances remain'ng available and unexpended on June 30, 1918, from the appropriations for automatic rifles and armored motor cars heretofore made are hereby reappropriated and made available to and including June 30, 1919.

Mr. TILSON. Those sums will be largely obligated by contract, anyway, will they not?

Col. RICE. We hope they will all be obligated, in which case this legislation would not be necessary; but it may happen they will not be, in which case it would revert to the Treasury; that is, if they were not obligated by contract.

Mr. KAHN. I understood you to say it would take you one year to get the 221,000 automatic guns?

Col. RICE. Yes, sir.

Mr. KAHN. And that would run six months into the next fiscal year?

Col. RICE. Yes, sir.

Mr. KAHN. Could you expend the entire \$237,144,000 that you are asking for in the remaining six months of the fiscal year 1919?

Col. RICE. That is largely included, Mr. Kahn, in the guns we have under order. There is over \$100,000,000 of that which is authorized under the last bill.

Mr. KAHN. I do not quite get that.

Col. RICE. We have ordered the guns.

Mr. KAHN. But you are paying for it out of these appropriations of \$291,000,000 in the fiscal year 1918. Now you are asking for \$237,000,000 for the fiscal year 1919. That is the bill we are now considering. You say that these 221,000 guns will not be delivered until six months of the fiscal year 1919 shall have passed, and, of course, you are paying for them out of the \$291,000,000 which you have already had, are you not?

Col. RICE. Plus the contract authorization of something over \$100,000,000 which is carried in addition in the old bill.

The CHAIRMAN. But you have about \$130,000,000 left out of that appropriation?

Mr. KAHN. Yes; \$129,000,000 that you have not contracted for according to the statement you made to us this morning.

Col. RICE. Yes, sir; that is correct.

Mr. KAHN. Now, you will probably contract for that during the remaining months of the fiscal year 1918. In other words, during the present fiscal year you will probably use that all up?

Col. RICE. It will mainly go not to machine guns proper but to their tools and accessories and spare parts, and things which have not yet been ordered.

Mr. KAHN. But you will use it all up during the next six months. Assuming that you will, and that you start with a clear sheet on the 1st of July, 1918, many of the 221,000 guns will not be delivered until six months of the next fiscal year shall have expired?

Col. RICE. Yes, sir.

Mr. KAHN. Now, would you then require all of the \$237,144,000 for the six months remaining of the next fiscal year?

Col. RICE. We expect to.

Mr. KAHN. You expect to use it all in the six months?

Col. RICE. Yes, sir.

The CHAIRMAN. For what purpose, Colonel? You will already have the guns by that time.

Col. RICE. There are still very large quantities of tools, accessories, spare parts, and things of that kind which have not yet been ordered. The spare parts alone for these guns run from 40 to 60 per cent of the value of the gun, and they have mainly not yet been put in process of procurement.

Mr. KAHN. Of course, I assume the Army will be considerably increased beyond the 1,500,000 men that you are estimating for, and it may take a great many additional guns to supply them.

Col. RICE. Yes, sir; but that is not included in this estimate.

Mr. KAHN. It is not?

Col. RICE. No, sir; this estimate is intended to cover what is needed for the first million and a half men, including maintenance for the year 1919, including all of the spare parts which have to be furnished and which amount to from 40 to 60 per cent of the total, and those have not yet all been ordered. Now, this \$237,000,000 has in it \$118,000,000 which was figured in as the contract authorization for the procurement of these two hundred and odd-thousand guns which we have been talking about, with all their tools, accessories, and spare parts; so that leaves only \$119,000,000 of new appropriation.

The CHAIRMAN. Let me understand you there. You are referring to the \$119,000,000 of the \$237,000,000 we have been talking about and it will take that much to keep an army supplied with 221,000 guns?

Col. RICE. That includes the cost of the guns, those which we are still going to buy, and their maintenance, with all the parts that are necessary, and it is estimated on a liberal basis.

The CHAIRMAN. Then, you intend to buy more guns than the 221,000 you have contracted for?

Col. RICE. I spoke of 20,000 we were figuring on, of the light guns, to go to Winchester.

The CHAIRMAN. Any others?

Col. RICE. No others at this moment.

The CHAIRMAN. Except the 20,000 more?

Col. RICE. Yes, sir.

Mr. KAHN. Assuming that the Army should be increased over 1,500,000 men in the next fiscal year and this money you are asking for should be necessary for an army of 1,500,000 men, would you come in with a deficit?

Col. RICE. We would come in with a supplemental estimate; yes, sir.

Mr. KAHN. This money would not be enough if the Army were increased by 500,000 men?

Col. RICE. We do not expect it to be; no, sir.

Mr. KAHN. So that if the second increment of the draft should be called before the beginning of the next fiscal year you will start at the beginning of the fiscal year, if we just give you this amount, practically with a deficiency.

Col. RICE. Assuming that all the estimates we have made are reasonable, but, of course, we have a good deal of information to get yet in regard to the determination of the cost. When we get a definite figure we will be able to give you a far more definite statement along that line, of course. As to the estimates we have made, your statement is correct.

The CHAIRMAN. Col. Rice, how many of those rifles has the Army now?

Col. RICE. About 14,000.

Mr. TILSON. What have we now in addition to those?

Col. RICE. We have 2,500 Lewis, 2,500 Colts, and a considerable number of Vickers, approximately 2,000, and the rest are made up of the French guns.

Mr. TILSON. Those are chambered for our ammunition?

Col. RICE. Not entirely. They are all chambered for our ammunition, except the French Chauchat and the French Hotchkiss.

Mr. KAHN. Have you any French Chauchat?

Col. RICE. Yes, sir—you mean here in this country?

Mr. KAHN. No; all told.

Col. RICE. We have 2,200 delivered here.

Mr. KAHN. Are those included in the 14,000 you spoke of?

Col. RICE. Yes, sir. We have on the other side the guns needed for all our troops that are there, with a liberal allowance of spares.

The CHAIRMAN. That has been true all the time the troops have been over there, has it not?

Col. RICE. Yes, sir.

The CHAIRMAN. What have they mainly over there, the Chauchat?

Col. RICE. They are equipped with the Hotchkiss for heavy use and the Chauchat for light use, and they are now chambered for French ammunition.

Mr. KAHN. Is the Chauchat rifle a serviceable rifle for trench work?

Col. RICE. It is a light gun, with which the whole French Army is equipped.

Mr. KAHN. But they are also equipped with the machine guns which set on the edge of the trench?

Col. RICE. Yes, sir.

Mr. KAHN. And the Chauchat, as I understand it, is carried from the side in a socket that is fixed to the belt. As I understand it, that rifle is serviceable only when the man gets out of the trench, and he uses it like a hose, and points it hither and thither. Do the French themselves have any considerable use for that gun outside of the trenches?

Col. RICE. The primary use for it is as you have stated, but they do use it in firing from the prone position and in the kneeling position. The Chauchat is a shorter range gun than ours and it is not so good for the long-range firing, but taking into consideration the distances between the trenches over there, it is pretty good for sniping and things of that kind.

Mr. KAHN. How much do we pay the French Government for those guns; can you tell us?

Col. RICE. No, sir; I can not, because we have not yet been able to get a price from the French Government. They said it would not be less than \$140—what we could call practically a stripped piece, with only the normal tools and accessories and spare parts—but we have not yet been able to get from them a definite statement in regard to the price.

Mr. KAHN. Then you can not tell us at this time what the actual cost of that gun is?

Col. RICE. No, sir; the exact price has not yet been secured.

Mr. KAHN. Have we any price on the ammunition they are furnishing for those guns?

Col. RICE. I have not. As a matter of fact, we are largely furnishing our own ammunition.

Mr. KAHN. But we can not use our own ammunition in the Chauchat guns?

Col. RICE. No; but there is a lot of such ammunition being manufactured in this country, and we are continuing the manufacture of that ammunition for this purpose.

Mr. KAHN. Then we are really furnishing the ammunition for them?

Col. RICE. A part of it. The French furnished the first, until we could get our manufacturers far enough along to take it up. They have furnished a number of million rounds, but we have not a definite price on that, as yet.

Mr. KAHN. Do you expect to furnish those guns in any considerable number, over there?

Col. RICE. The Chauchat guns?

Mr. KAHN. Yes.

Col. RICE. We have something like 38,000 already under order.

Mr. KAHN. Will the new ones, which we are now having made, which are now under orders, shoot our ammunition?

Col. RICE. Yes, sir.

Mr. KAHN. They have all been fixed to shoot American ammunition?

Col. RICE. Yes, sir. Every gun in the test at Springfield, in May, shot American ammunition.

Mr. SHALLENBERGER. You told us you placed orders, out of the money that has already been appropriated, for 221,000 guns, and so far you have received less than 15,000; less than 15,000 have been delivered. Is that about the fact?

Col. RICE. That is correct; yes, sir.

Mr. SHALLENBERGER. Can you tell us when the orders were placed for the various large amounts, and how long they have been outstanding?

Col. RICE. I can give you all those dates, if you want them all.

Mr. SHALLENBERGER. Could you put them in the record?

Col. RICE. Yes; beginning with December, 1916.

Mr. SHALLENBERGER. That was the first contract you let for those guns?

Col. RICE. For the guns I am talking about; yes, sir; and the orders extend up to the present time.

Mr. SHALLENBERGER. We let contracts for about 4,000 Vickers prior to the declaration of war, did we not?

Col. RICE. Yes, sir.

Mr. SHALLENBERGER. Was this contract in December the first big contract following that?

Col. RICE. This was that one. That was the order of December, 1916.

Mr. SHALLENBERGER. That was prior to the declaration of war?

Col. RICE. Yes, sir.

Mr. SHALLENBERGER. When did the contracts begin, subsequent to the declaration of war?

Col. RICE. The first one subsequent to the declaration of war was on April 12.

Mr. SHALLENBERGER. Then the others followed?

Col. RICE. Yes, sir. There was a contract on May 26, two in June, three in July, etc.

Mr. SHALLENBERGER. Will you include in that statement the number of guns that were included in each contract?

Col. RICE. I will put in a complete statement in regard to the contracts.

(The statement referred to is as follows:)

The list of the orders placed for machine guns beginning November 19, 1915, is as follows:

Date of order.	Type of gun.	Number.	Manufacturer.
Nov. 17, 1915	Vickers.....	125	Colt's Patent Fire Arms Manufacturing Co.
Dec. 16, 1916	.....do.....	4,000	Do.
Apr. 12, 1917	Lewis, caliber .30.....	1,300	Savage Arms Corporation.
May 25, 1917	Colt machine gun, oscillating lever type.	2,500	Marlin-Rockwell Corporation.
June 12, 1917	Lewis, caliber .30.....	4,400	Savage Arms Corporation.
June 18, 1917	.....do.....	2,000	Do.
July 9, 1917	Chauchat.....	900	French Government.
Do.....	Hotchkiss.....	380	Do.
July 23, 1917	Chauchat.....	1,720	Do.
July 16, 1917	Browning, light type.....	12,000	Colt's Patent Fire Arms Manufacturing Co.
Do.....	Browning, heavy.....	10,000	Do.
July 24, 1917	Hotchkiss.....	2	French Government.
July 26, 1917	Lewis, caliber .30.....	12,000	Savage Arms Corporation.
Aug. 4, 1917	Browning, light.....	20,000	Marlin-Rockwell Corporation.
Do.....	Browning, heavy.....	10,000	Remington Arms Union Metallic Cartridge Co.
Do.....	Browning, aviation.....	5,000	Do.
Aug. 7, 1917	Hotchkiss.....	1	French Government.
Aug. 8, 1917	.....do.....	60	Do.
Aug. 9, 1917	Chauchat, caliber 8 mm.....	4,000	Do.
Do.....	Chauchat, caliber .30.....	25,000	Do.
Aug. 14, 1917	Chauchat.....	1,800	Do.
Aug. 27, 1917	Hotchkiss, caliber 8 mm.....	1,500	Do.
Sept. 1, 1917	Browning, light.....	25,000	Winchester Repeating Arms Co.
Sept. 4, 1917	Chauchat.....	720	French Government.
Do.....	Hotchkiss.....	326	Do.
Sept. 5, 1917	Vickers.....	3,000	Colt's Patent Fire Arms Manufacturing Co.
Sept. 8, 1917	Lewis, caliber .303.....	750	Savage Arms Corporation.
Sept. 25, 1917	Marlin aircraft.....	13,000	Marlin-Rockwell Corporation.
Aug. 26, 1917	.....do.....	10,000	Do.
Sept. 25, 1917	Lewis, aviation.....	22,000	Savage Arms Corporation.
Sept. 26, 1917	Browning, aviation.....	5,000	Marlin-Rockwell Corporation.
Sept. 28, 1917	Hotchkiss.....	12	French Government.
Nov. —, 1917	Chauchat.....	8,044	Do.
Dec. 12, 1917	Vickers.....	5,000	Colt's Patent Fire Arms Manufacturing Co.
Dec. 19, 1917	Browning, aviation.....	10,000	Marlin-Rockwell Corporation.
	Total.....	221,540	

Mr. SHALLENBERGER. You gave us the price of the heavy Browning and the light Browning gun and the Vickers tripod and the Lewis gun. Have you purchased any more Vickers guns, subsequent to the order of last December, since the declaration of war?

Col. RICE. Yes, sir.

Mr. SHALLENBERGER. What price are you paying now?

Col. RICE. We are paying \$850, without the tripod or any spare parts.

Mr. SHALLENBERGER. That does not include the accessories?

Col. RICE. No, sir.

Mr. SHALLENBERGER. We had a statement from the Chief of Ordnance showing that the Vickers gun, with the tripod, cost about a thousand dollars, and then there were some accessories amounting to about \$1,700, running the price of the gun up to \$2,700. Do we still have to buy that amount of accessories with the gun?

Col. RICE. It would run a little lower than that now at the old prices, because we have adopted, in place of using mules and pack outfits, the French system of using little carts with mules attached to

them, which runs down the price \$300 or \$400. There is to be set against that the increase in the price of production, which makes the total about the same as before.

Mr. SHALLENBERGER. How much in the way of accessories do you have to have with the heavy Browning gun?

Col. RICE. Just about the same as with the Vickers, except that the belts and some other articles are cheaper.

Mr. SHALLENBERGER. So that the actual cost of the gun, ready to put in the field, would be something over \$2,000.

Col. RICE. Yes, sir.

Mr. SHALLENBERGER. In the case of the light Browning gun and the Lewis gun, you do not require that amount of accessories, do you? They are practically built ready for fighting purposes, at the price of \$280?

Col. RICE. No, sir. While the price does not run as high with them as it does with the heavy guns, we have to have transportation for them, and have to have large numbers of magazines or clips. The Lewis gun, as originally provided, was as expensive as the Vickers, because of the great number of magazines it was necessary to have in order to get the magazines loaded with cartridges in sufficient quantities on hand before the fight began. That has been reduced somewhat by the fact that it is used now mainly as an aeroplane gun, and so we do not need so many magazines.

The Browning will be much in the same class as the Lewis was when used on the ground. That is to say, the cost of extra parts and accessories will cost not far from those for a heavy gun—partly due to a greater allowance of repair parts.

Mr. SHALLENBERGER. That is the light gun?

Col. RICE. Yes, sir.

Mr. SHALLENBERGER. While the Lewis gun is priced to-day at \$750, including a certain number of magazines, enough for about 600 shots, 47 to the magazine, and a box of accessories, so that the gun could go into action and be fired at this rate, without any additional accessories, the additional accessories required would be largely the magazines which you speak of and the necessary transportation to take the additional magazines into action. But those would not be, so far as the number are concerned, anything like the accessories contemplated for the heavy gun, would they; that is, for the Lewis gun? The metal magazines are not expensive, are they?

Col. RICE. They are \$6 apiece. That is what we did pay for them on the first order. We are paying now \$5. They were exceedingly expensive, and that was one of the things that ran the cost up so high.

Mr. SHALLENBERGER. Do you not think that is an exorbitant price for metal magazines like that, stamped out by machinery?

Col. RICE. Yes, sir; I do.

Mr. SHALLENBERGER. What do you pay each for the cotton belts?

Col. RICE. I would like to correct this figure later in the record, if necessary; but it runs something like \$8 apiece for a 250-cartridge belt.

Mr. SHALLENBERGER. In the price which Gen. Crozier gave us in the cost of that \$2,700 rifle the price of those belts was put at something like \$6 apiece for a 250-cartridge belt.

Col. RICE. That is for a 250-cartridge belt?

Mr. SHALLENBERGER. Yes. They are higher now, I suppose. You mean that each belt which carries 250 cartridges costs \$8?

Col. RICE. On the cotton belt used with the Browning gun the price is \$3, and for the flax belt I think the price of \$6 or \$8 would be about right. The last contract cost was \$8.13.

Mr. SHALLENBERGER. You know, of course, that in France the weather is very wet and rainy, and that there is constant moisture. What report have you of any difficulty in connection with these belts getting wet, and the serviceability of the belts under those conditions, as compared to the metal carrier for the cartridges? Is there anything serious in reference to that?

Col. RICE. We have had no serious reports. The most frequently used heavy guns over the—the Vickers and the Hotchiss—both use a belt.

Mr. SHALLENBERGER. You have not had any reports that those belts get wet in bad weather and refuse to work?

Col. RICE. We have not had such a report. There is no question but that a certain amount of difficulty must occur under conditions of that kind.

Mr. SHALLENBERGER. You have not had a sufficiently serious report to make it a serious proposition, as to whether or not that might make the gun practically impossible of use under the trench conditions existing? I have been informed that certain of the armies over there did not permit the heavy guns using such a belt to go into the trenches because they were not as mobile, and that the trouble with the belts was so serious that they had to confine the actual trench fighting to the fighting with the Lewis gun, which did not have that kind of a belt. Have you had any report of that kind, in reference to that matter?

Col. RICE. No, sir. Both the British and the French armies use the heavy guns with the belts, and some of them in the trenches, but a good many of them may be located in other isolated places, for strategic reasons.

Mr. SHALLENBERGER. The reason I asked you about the additional cost is because I notice, in compiling the figures that with the amount of money you ask for this time and the amount we gave you last year, the total amount for machine guns is \$529,000,000. If we take the cost of the guns and the cost of accessories it would seem that that would pay for about a million machine guns. Would it not be a better proposition to buy the guns complete than to pay the tremendous prices that are paid for the accessories, so that you would have a great many guns in reserve, behind each man?

Col. RICE. You have to have the accessories in order to operate the guns successfully.

Mr. SHALLENBERGER. A certain amount of them.

Col. RICE. You might cut down the spare parts and buy more guns.

Mr. SHALLENBERGER. Then in reference to the cost of transportation for each one of these guns, the Vickers gun, or any of the guns, do you have any statement there to show the amount of accessories you expect to buy, or the amount you expect to pay for transporting

these guns, or the amount you expect to pay for getting the transportation?

Col. RICE. Yes; I can give you an estimate of that. I have had it in a lump sum, but I can give you the figures.

Mr. SHALLENBERGER. As it appears in the statement, it would seem that we were providing the money for one gun for each man, for the fighting men of the United States over there, and it would appear that we are providing the money to buy a million machine guns for a million men, when, as a matter of fact, a great deal of the money appropriated has to be spent for accessories and not for the guns themselves.

Col. RICE. I think the best answer to give you is that we are doing in that respect only what our allies, who have been in the war three years, are doing. Our methods of the purchase of accessories and spare parts are modeled on their experience, as being necessary.

Mr. SHALLENBERGER. In order to give us better information as to how it is expended, will you give the actual cost of the accessories that go with the gun? The Vicker gun was priced before at \$2,700.

Now, according to the statement you make here, without taking into consideration at all all these other statements, it looks as though it was vastly cheaper than it was before. But I think, in order to make this statement intelligible to Members of Congress, it would be well if you would include the list of accessories and the cost of those accessories that go with each gun, so that we can see that the money appropriated does not buy anything like the number of guns it looks like it would buy.

Col. RICE. I would be very glad to put in that table.

Mr. SHALLENBERGER. I suggest that because I realized myself when these figures were given on the guns before and when the prices paid for the accessories are given it would appear that the price is much cheaper than it is when you come to find out what it really is.

NOTE.—The statement is as follows:

The price usually given for a machine gun or an automatic rifle includes a limited number of tools, accessories, and spare parts, but does not provide for a sufficient number of such articles, even for the normal service of the piece.

For heavy guns the following articles are normally in addition to those included in the price of the gun proper: Spare barrels, feed belts, ammunition boxes, water boxes, belt-loading machines, transportation equipment, including harness or pack outfits, saddlers' tools, blacksmiths' tools, sets of base spares for repair, which vary in value between 20 and 60 per cent of the original cost, depending upon the type of gun.

For automatic machine rifles these additional articles usually comprise magazines, magazine fillers, magazine containers, transportation equipment, including harness or pack outfits, saddlers' tools, blacksmiths' tools, and sets of base spares.

For machine guns, aviation type fixed, these additional articles usually comprise spare barrels, feed belts, ammunition boxes, defective-cartridge extractors, belt-loading machines, and asbestos mittens.

For automatic machine rifles, aviation type, flexible, these additional articles usually comprise special type magazines, special type magazine containers, magazine loaders, and asbestos mittens.

The following statement gives the estimated cost of machine guns and automatic rifles, including all accessories, equipment, parts, etc., necessary for service:

Type of gun.	Price of gun with usual equipment.	Price of additional equipment including base spares for one year's maintenance.	Total price.
Vickers.....	\$1,315.94	\$1,333.23	\$2,649.17
Vickers aircraft.....	1,150.00	1,198.00	2,348.00
Lewis aircraft.....	660.00	1,025.00	1,685.00
Marlin aircraft ¹	552.80	623.68	1,176.48
Browning heavy ²	650.00	1,680.00	2,330.00
Browning aircraft.....	600.00	998.00	1,598.00
Browning light ²	305.00	1,741.00	2,046.00

¹ No royalties to be paid. Not a patented article.

² Royalties to be paid in a lump sum here, estimated in the price of the guns at \$50 and \$25, respectively.

Do you know how many guns are contemplated for a machine-gun company in our organization?

Col. RICE. Sixteen.

Mr. SHALLENBERGER. How many of the machine-gun companies do you have with a regiment? Do you contemplate a certain number of machine-gun companies for each regiment?

Col. RICE. The machine-gun company is no longer with a regiment as a part of a regiment. We have 224 heavy machine guns in a division. That is without any allowance for spares or replacements that are actually needed.

Mr. SHALLENBERGER. Have brigades been done away with in the organization?

Col. RICE. No, sir; that includes the brigade companies.

Mr. SHALLENBERGER. A brigade is made up of two regiments?

Col. RICE. Two.

Mr. SHALLENBERGER. How many regiments are there in a division?

Col. RICE. There are two brigades, or four regiments in a division.

Mr. SHALLENBERGER. In order to get it a little more definitely, how many men now is it contemplated to have in our organization in a division?

Col. RICE. About 27,000 in front of the service of the rear.

Mr. SHALLENBERGER. And with that number of men you contemplate 224 heavy machine guns?

Col. RICE. Yes, sir.

Mr. SHALLENBERGER. Do you know how that corresponds with the number of machine guns that are furnished to that number of men in the French and English armies? Is that as many as they have?

Col. RICE. It is about the same. That was made up from a table furnished by Gen. Pershing's operations divisions after they had studied the French and English systems.

Mr. SHALLENBERGER. The Chauchat guns are carried by men in the companies, the men in the machine-gun companies, are they?

Col. RICE. They are carried by the men in the infantry companies.

Mr. SHALLENBERGER. How many of those is it contemplated to have to the company?

Col. RICE. Sixteen.

Mr. SHALLENBERGER. That is not the case with the French organization, is it?

Col. RICE. That is their present organization. I may say it is pretty generally expected that the number will be increased.

Mr. SHALLENBERGER. In regard to those Chauchat guns, you, of course, have no bid on them; you simply accept the offer of the French Government, and agree with the French Government upon the price for those guns, after ascertaining what a fair price for the manufacture of the guns is?

Col. RICE. We expect them to bill them to us practically at cost, as we are doing with the things we furnish to them.

Mr. SHALLENBERGER. In regard to the rifles you purchased in vast quantities, how did you arrive at the price of those guns; did you do that on the cost plus profit basis, or did you have any bids on the guns?

Col. RICE. There was no possibility of bidding, because it was a question of dragging people into the work.

Mr. SHALLENBERGER. Who fixed the price?

Col. RICE. The process was this. With two companies, we have a cost plus agreement in preparation, a cost plus fixed profit agreement. We arrive at the fixed profit by making a detailed estimate of the cost; the manufacturer makes his estimate and we make ours, and we figure 10 per cent of the cost, as nearly as we can get it, as a fixed profit. Then it is a matter of adjustment between the two estimates as to what is a reasonable cost to figure the 10 per cent profit on.

Mr. SHALLENBERGER. How do you arrive at the cost of the accessories? Is that where the profit in the manufacture of the gun is made, largely? Is there not vastly more profit in that than in the manufacture of the gun itself, at these prices?

Col. RICE. I think only in relation to the relative cost of the two. I do not think they make materially more on that cost value than they do on the others.

Mr. SHALLENBERGER. Does the company which makes the contract for the gun also furnish the accessories, or do you buy those from other companies?

Col. RICE. No, sir.

Mr. SHALLENBERGER. Do you allow the Colts Gun Co. to not only furnish the guns, but also all the accessories?

Col. RICE. In answer to that, I will have to say we do not buy accessories from the contractor for the guns, unless he offers the best prices and deliveries. We are buying all our belts, and we are about to buy all our tripods, and we are buying all our water boxes and ammunition boxes. In regard to defective-cartridge extractors, for instance, we tried to make an arrangement with the Colts people, but refused to give them the order because they wanted too much for the work. They were made by somebody else.

Mr. SHALLENBERGER. The heavy Browning gun is a water-cooled gun?

Col. RICE. Yes, sir.

Mr. SHALLENBERGER. What does it weigh, exclusive of the tripod?

Col. RICE. With the water in it, it weighs about 35 pounds.

Mr. SHALLENBERGER. It weighs practically about the same as the Vickers gun?

Col. RICE. Yes, sir.

Mr. SHALLENBERGER. You expect to mount it on a similar tripod?

Col. RICE. Yes, sir.

Mr. SHALLENBERGER. Have those guns been manufactured in this country in quantities yet? This gun has lately been developed and has not been made in large quantities yet, has it?

Col. RICE. No, sir.

Mr. SHALLENBERGER. But the tests you had with it are such as to satisfy you it is going to be a practical gun?

Col. RICE. We are quite sure that the only difficulties that are to be expected are those of manufacture, which will occur with any gun that is being newly manufactured by any company. The principle has been established as being first class, beyond question.

Mr. SHALLENBERGER. That gun carries 250 shots to the belt, the same as the Vickers and the colt gun?

Col. RICE. It may have, in practice. Our main supply is for 250-round belts, although we are buying some with 500, and some at 1,000.

Mr. SHALLENBERGER. And those 250-round belts in cotton cost \$3 and in flax about \$8?

Col. RICE. Yes, sir.

Mr. SHALLENBERGER. How many shots do you fire from the light Browning gun without reloading?

Col. RICE. Twenty.

Mr. SHALLENBERGER. The Chauchat guns fires about 16?

Col. RICE. It fires 20 also.

Mr. SHALLENBERGER. They are loaded with one clip, 20 shots at a time?

Col. RICE. Yes, sir; the clip on a Browning gun looks like a large clip for the Colt automatic pistol.

Mr. SHALLENBERGER. These guns can be used by firing them over the trench. They do not have to be fired from the hip; it is only in advancing when they shoot them that way; and they can also be used over a trench, the same as the Lewis gun?

Col. RICE. Yes, sir; the Browning gun we have would be used from the prone position, just as a rifle is used.

Mr. SHALLENBERGER. What gives you the assurance that you will have these guns, practically all the 20,000 guns delivered in a year?

Col. RICE. That is what we hope for.

Mr. SHALLENBERGER. I was wondering what gives you that assurance, when in eight months, practically, we have only gotten 14,000 guns. What have you to give you that assurance that you will get those Browning guns within a year?

Col. RICE. There is, of course, no real assurance. Our reason for that hope and expectation is that we have very many more people at work.

Mr. SHALLENBERGER. Have you got your contracts out with a heavy penalty against the manufacturers if they do not produce the guns in that time?

Col. RICE. We have a liquidated damages clause, but I doubt whether that will be very effective because the transportation situation and the labor situation and the fuel situation are such that they are beyond the control of the contractors, and it is going to be very difficult to determine whether any delay is his fault or not.

Mr. SHALLENBERGER. You let the contract for the 4,000 Vickers guns a year ago. Have you got all of them yet?

Col. RICE. No, sir.

Mr. SHALLENBERGER. How many of them have you?

Col. RICE. We have about 2,000.

Mr. SHALLENBERGER. How many do you expect to get next year? Why did they not get out the 4,000 in a year? We were told they would be gotten out in a year.

Col. RICE. We hoped they would. There are several reasons for that. As I stated a while ago, the Vickers is a very difficult gun to manufacture, and I think the Colt Co. and ourselves underestimated those difficulties.

I think also that they have had difficulty in organizing for quantity production, which was what they had to do in order to get them out. They have not been entirely successful from the manufacturing standpoint. They are getting better, and while we will probably never get as many of the Vickers as we hoped for, we will get more than we have gotten in the past. The deliveries are increasing.

Mr. SHALLENBERGER. How many of the heavy Vickers have you ordered, in addition to the first 4,000?

Col. RICE. Eight thousand.

Mr. SHALLENBERGER. What makes you think that the production of the Browning gun will be more rapid and that they will not encounter the same troubles with that gun, which is absolutely a new gun, that were encountered with the Vickers gun? It will be a serious proposition if we give out the orders and only get 50 per cent delivered.

Col. RICE. It will be somewhat serious. In our orders we are counting on 50 per cent wastage, and the delivery of the wastage guns could be a little bit delayed. I am speaking of the heavy guns.

Mr. SHALLENBERGER. If you get 50 per cent of the guns delivered that are ordered, you think we would still have enough for the coming year?

Col. RICE. I do not believe quite that, but I do not believe we would be in as bad a fix as would appear.

Mr. SHALLENBERGER. Does your purchases contemplate 50 per cent more than you expect really to put in the field?

Col. RICE. About 50 per cent more than are actually in the hands of the troops; yes, sir. Our further reason for having hope in regard to the Browning gun is that it is a simpler design, and it is very much more simple in manufacture than the Vickers gun.

Mr. SHALLENBERGER. I would like to have you explain that. Why is it so much more simple? Is it a simpler gun in itself?

Col. RICE. Yes, sir; the mechanism is simpler. The cuts are straight; the cuts are all ordinary machine work instead of being special work, as is often the case with the Vickers gun. It is practically a straight job, and furthermore, the gun was designed with larger tolerances, so that the close work of the Vickers gun is not so necessary on this gun. Then we have many more people working on it. We have put as many people on that as we can.

Mr. SHALLENBERGER. You have placed orders for 221,000 guns, and you are asking for enough money to buy something like 200,000 more for the succeeding year at the same average price. That would give you about 400,000 guns for an army of 1,500,000 men. That is vastly

greater than the Ordnance Bureau contemplated a year or so ago, taking into consideration the most extravagant figures you had under consideration.

Col. RICE. This additional amount——

Mr. SHALLENBERGER. I mean prior to the war. When we were making appropriations for machine guns a year or so ago, we were given a statement from the Ordnance Bureau about the number of rifles you thought we ought to have for 1,000,000 men, and also we were given a statement as to the time it would take to produce them. Those figures have been very greatly enlarged since war was declared?

Col. RICE. The amount of money we are asking for is for the completion of the 221,000 and their maintenance. It does not add any new guns, except the 20,000, to which I have previously referred.

Mr. SHALLENBERGER. And the \$529,000,000 has not been paid for the guns?

Col. RICE. No; there is a contract authorization carried in the last bill for \$118,000,000, which we are now asking for in the \$237,000,000. All the figures for machine guns are much larger than we anticipated they would be before the war.

Mr. SHALLENBERGER. I have before me a statement made by the Chief of the Bureau of Ordnance in answer to some questions by Mr. Kahn in 1916. He stated that the number of machine guns would, in his opinion, have to be very greatly enlarged, and the contemplated number at that time for the Army was 2,040 guns. Gen. Crozier stated:

If we had all the facilities that are in the country, could command them, it would take less than a year, very considerably less than a year.

I overstated the time that would be required to meet the present needs in my previous answer very considerably. The capacity of the country would produce enough guns, if we could command that capacity, to eliminate our present shortage in less than one month, and to eliminate the shortage which would result from an equipment three or four times as great as we have been contemplating would naturally then take three or four months. I think the whole thing could be provided for in less than six months with the capacity which is in the country now or which will be within three or four months.

Those figures covered our understanding of the requirements for machine guns, as we viewed the matter at that time. Apparently that understanding of the requirements of machine guns has been enlarged tremendously since the outbreak of war.

Col. RICE. There is no question of that, and immediately preceding the war. The figures went up very largely just before the war, but even as large as those were, they were nothing like the figures we have now.

Mr. SHALLENBERGER. It has been shown by our experience with the 4,000 guns that were ordered that we could not have gotten the 8,000 or 10,000 guns contemplated in that statement in three or four months, as was believed.

Col. RICE. Not of that type. I want to add one other thing as one of my reasons for hoping we will get the other guns. That is that we have a number of Browning's light guns that have been manufactured and fired. They have been run through the shops and made by machine operations and put together and fired, so that we feel sure they will come along.

(Thereupon, the committee adjourned until to-morrow, Saturday, January 5, 1918, at 10.30 o'clock a. m.)

ARMY APPROPRIATION BILL.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON MILITARY AFFAIRS,
Saturday, January 5, 1918.

The committee met at 10.30 o'clock a. m., Hon. S. Hubert Dent, jr. (chairman), presiding.

STATEMENT OF COL. J. H. RICE, ORDNANCE DEPARTMENT, UNITED STATES ARMY—Resumed.

Mr. SHALLENBERGER. Colonel, in stating the cost of some of the equipment that goes with the heavy machine guns which have a belt that feeds the cartridges to the gun, as I recall, you testified the cost of some of the linen belts was \$8 apiece?

Col. RICE. About \$8; yes, sir.

Mr. SHALLENBERGER. Can you tell whether or not this [indicating] is a linen belt of that character? This was furnished me by the Marlin people.

Col. RICE. No; this is a cotton belt, such as we use in the Marlin gun, and we also use it on the Browning gun.

Mr. SHALLENBERGER. This is about a \$3 belt, then?

Col. RICE. Yes.

Mr. SHALLENBERGER. How much heavier is the linen belt? Is it just the difference in the material, rather than the size, or are the heavier belts larger and wider?

Col. RICE. They are wider, and they are bound with brass clips, so that they are much more expensive on that account. We have under investigation the question as to whether we can replace them with the cotton belt; but up to the present time we have not felt justified in doing that because, as you surmised in a question you asked yesterday, there has been difficulty about the warping and stretching, etc., of the belt which has been to a degree prevented by the clips.

Mr. SHALLENBERGER. How many of these belts are furnished with the Marlin gun or the Colt gun at the price quoted, do you remember? What I have in mind is this, Colonel: In the price quoted to us by Gen. Crozier of \$2,700 on the heavy type of Vickers gun, he stated that with the Vickers gun there are 20 ammunition boxes at \$6 each and 20 ammunition belts. Now, the price quoted on the Marlin gun was something, as I recall, like \$650, and there were a certain number of belts which went with that gun at that price. Do you remember how many belts were quoted with this gun at these prices?

Col. RICE. Four belts are furnished with each gun and are included in the price of the gun; 19 additional are purchased, but are not included in the price of the gun.

Mr. SHALLENBERGER. With none of those guns do they quote enough belts or other accessories. I will say to you that I had a talk with Col. Lewis and also with a Marlin man as to the amount of accessories which they furnished with their guns at the quoted price of \$650 or \$750, and it appeared to me that they gave a great deal of this extra equipment with the guns, and I wondered whether you were still getting a sufficient amount of these belts and other accessories at these prices, or whether it was only in the case of these heavy guns that you had to buy this tremendous amount of extra material.

Col. RICE. No; we have to buy a considerable quantity of extra material with all of them. The value of the parts that are furnished with the gun is about the same with all of them except the Vickers, in which case there are no parts furnished with the guns. It is a total of something over \$200, between \$200 and \$300, except for the Colt gun, for which the cost is about \$40.

Mr. SHALLENBERGER. With the Marlin gun?

Col. RICE. With all of them.

Mr. SHALLENBERGER. Do you mean there is that much in value in addition to the gun, or do you get that much with the gun?

Col. RICE. We get that much with the gun.

Mr. SHALLENBERGER. But with the Vickers gun there are practically no extra parts furnished?

Col. RICE. None in the price which I have given. That has to be added in.

Mr. SHALLENBERGER. The price quoted here for the tools for loading the cartridges in the belt is \$83.94 with the Vickers gun, and one of these companies told me that they furnished a loading tool at \$5 for loading their cartridges into the extra belts or extra cartridge carriers. Do you know anything about that? The point I am making is that the cost of the extra parts for the Vickers seems to be so much in excess of the other guns that I thought it made the others apparently very much cheaper, if they were anything like as effective.

Col. RICE. If there was any such price as that quoted, it was for a charger of some kind which is very simple and not at all like the belt-loading machines, and the price of the latter includes a considerable number of spare parts carried in the belt-loading machine box for convenience, but not a part of the machine itself.

Mr. SHALLENBERGER. Does the Browning gun and all of these belt-loading guns have a loading machine of about the same cost as the Vickers?

Col. RICE. They have loading machines, and the best one we know about is the Vickers, which will probably be used with the Browning.

Mr. SHALLENBERGER. And that costs about the same?

Col. RICE. I have it quoted here at \$50.

Mr. SHALLENBERGER. It is very much cheaper now.

Col. RICE. We have worked down a good many of these prices somewhat over old figures in spite of the increase in cost.

Mr. SHALLENBERGER. In purchasing the Vickers gun now, with the reduced prices you have on all these accessories, what does it cost? Have you that statement figured out for us?

Col. RICE. The total cost is, as it was before, about \$2,695.

Mr. SHALLENBERGER. So you have not been able to——

Col. RICE (interposing). Where we have cut down one place it has gone up in another.

Mr. SHALLENBERGER. Have you any information about the profit per gun to these manufacturers? For instance, we will say the profit to the manufacturers of the Vickers gun at \$2,700, or the Browning gun. I understand they are going to cost about the same amount of money.

Col. RICE. No; the Browning gun is going to be cheaper.

Mr. SHALLENBERGER. How much cheaper?

Col. RICE. We figure it at about \$400 cheaper, as the total, including all equipment.

Mr. SHALLENBERGER. Could you give us your idea of the amount of profit per gun to these manufacturers on those guns?

Col. RICE. We have not the figures on the Vickers. The only way we could get it would be to put an expert accountant in their plant, and, of course, that is a very difficult thing to do, and we have not been able to do it on the Vickers gun as yet, although we hope to. The manufacturers claim to have lost money on the old price on the Vickers, and secured a recommendation from the War Industries Board for an increase in price on the later orders. At first the price under negotiation was cut down a trifle, \$25 a gun, and then on the next order, as I say, they convinced the War Industries Board that they were losing money and got the price raised. On the other guns I think they are making somewhere between 15 and 20 per cent.

Mr. SHALLENBERGER. You mean the other makes, aside from the Vickers?

Col. RICE. Yes, sir.

Mr. SHALLENBERGER. You think that would be a fair statement of the profit?

Col. RICE. I am quite sure it will not run over 20 per cent and probably will be nearer 15 per cent. If it does run over 20 per cent we are going to try to see that it comes down.

Mr. SHALLENBERGER. These guns, after all, are fabricated out of steel and wood, material that is very stable in price and produced in vast quantities, and known to have a fixed price per pound, and after the machines are manufactured and these implements commence to be produced in vast quantities like they are now, why should not they be greatly reduced in price like other fabricated instruments of steel and wood?

Col. RICE. We expect them to be reduced greatly, and that is why we have employed expert accountants and have a form of contract by which we can adjust on the second part of the contract any mistakes there may have been in the first. Of course, in the beginning there are a good many amortizations which are to be made, which are included in the price. When those have once been paid, then the price ought to be reduced very materially, and we expect that that will be the case. We hope, for instance, to get the Lewis gun pretty soon for somewhere around three or four hundred dollars.

Mr. SHALLENBERGER. I will say, in that respect, that in a little talk which Mr. Tilson and myself had with Col. Lewis and one of his men, he stated that if they could get a large order for those guns they could make them at a lower price than they were offering them for.

Col. Rice. They now have orders for 42,000, and we are writing off the amortization on the earlier orders, and unless we have to further increase their plant the price will come down.

Mr. SHALLENBERGER. The cost of one of these guns completed now is about that of a first-class automobile or other highly developed and specialized machine, which seems to carry a greater amount of material and require more skill, and it occurred to me that with the vast orders which the Government is now putting out, and in all probability in the future will put out, that under the ordinary experience in business these prices ought to be very materially reduced to the Government, and I wondered if you had that in contemplation.

Col. Rice. It is my expectation they will be reduced very materially within the next six months. We have laid all the foundation for that reduction, and for a knowledge of what they are costing, which, of course, is the first step.

Mr. SHALLENBERGER. Have you any figures to show the amount of ammunition that will be required for this large number of guns in case of a year's war?

Col. Rice. No, sir; I have not, but I can get it for you. The amount of ammunition which is figured for all purposes, I may say, is beyond the present capacity of the country to produce, and we have to develop additional capacity.

(The ammunition required for one year for 1,000,000 men, organized into 30 divisions, is approximately 2,464,196,000 rounds.)

Mr. SHALLENBERGER. I recall that Col. Thompson, in reply to a question by a member of the committee, Mr. Kahn, I think, about the amount of ammunition that was required in case the Army was increased 1,000,000 men over what is contemplated now of 1,500,000, in substance said that it would be a very easy computation, because the present figure was 1,400 rounds per man, and it would simply be a question of multiplying by 1,000,000 the amount of ammunition per man. Do you know whether that is the number of rounds per man now contemplated for a year's war?

Col. Rice. It is my understanding that is about correct, except, of course, for machine guns, and that is figured on guns rather than on men.

Mr. SHALLENBERGER. I was just going to ask whether that included the machine guns or whether that was for the rifles alone. The reason I am asking this, Colonel, is because we have had testimony here that the machine gun shoots about 60 per cent of the amount of ammunition used by a certain number of men armed with machine guns and rifles. In other words, that to-day the machine guns for 3,000 men, say, equipped with the same number of rifles, that the machine guns shoot about 60 per cent of the ammunition and the rifles 40 per cent. That would, of course, indicate that this number of machine guns which is to be provided, 215,000, would fire a tremendous amount of this ammunition. We have testimony here from the Chief of Ordnance that during one period the Austrian

Army alone fired 18,000,000,000 rounds of small-arms ammunition, and we are not providing for anything like that number of rounds of ammunition, according to the figures given this committee, and machine-gun fire now is much greater in value than it was at the time that statement was given to us; and I wanted to know, with this large number of machine guns and this tremendous investment of money, if we have, in your opinion, a sufficient number of small-arms ammunition to keep the guns going, because, of course, the guns will not be of any value unless we have ammunition for them.

Col. RICE. I think we have sufficient. While the number of rounds per gun is very much greater than in the case of the individual rifle, of course, there are a number of men required for the service of each machine gun, so that makes some compensation. The fact too, is that the difference between a company using 16 machine guns and a certain number of rifles is not very different from the same number of men using the rifles. There has been some compensation also, as compared with the previous situation, in that some of the people in the companies nowadays use bombs only and are not armed with the rifles. We should be able to meet the needs of small-arms ammunition requirements complete, I think. It is going to be a good deal of a pull, and we are going to have to develop further capacity. I am sure.

Mr. SHALLENBERGER. Colonel, is it your opinion that the changing of these French guns to American ammunition was essential to the proper conduct of this war? Have the other nations had any trouble at all serious with their ammunition, either the English or the French ammunition? We are using, as I understand, French guns and English guns; and I will say to you that I have been told by officers of those armies that they have had no trouble with their ammunition that was serious at all—that is, with small-arms ammunition—and that battles have not been lost on that account, and that there has been practically no trouble with that sort of ammunition, and that the complaint has not been against that ammunition.

Col. RICE. I think the ammunition of both the English and the French is fairly good, but it is nothing like as good as ours.

Mr. SHALLENBERGER. You do not think it is?

Col. RICE. No, sir.

Mr. SHALLENBERGER. And you think this delay, for instance, in the rechambering of these French rifles and the rechambering of the British rifles was worth while?

Col. RICE. There is no delay, practically, Governor. We are using the French ammunition and the French chambered guns up to the time when we are able to replace them with guns chambered for our ammunition.

Mr. SHALLENBERGER. Of course, it has been said that one of the reasons for the change of ammunition was that we did not want to have different kinds of ammunition in the hands of our troops. Of course, as long as we use these French rifles and the French Chauchat guns—and they are using more ammunition than all the rifles will use, according to the testimony we have here—you will have more French ammunition with our armies than of our own ammunition; is not that true?

Col. RICE. Probably; yes.

Mr. SHALLENBERGER. That would naturally follow.

Col. RICE. Certainly; there will be great quantities of it.

Mr. SHALLENBERGER. But, in your opinion, that will not occur very long, because we are rapidly chambering the Chauchat gun to take our ammunition, so that if we do not go into this war heavily before the middle of the summer we will have guns of the Chauchat type that will handle our ammunition. You think we can safely say that?

Col. RICE. Yes, sir.

Mr. SHALLENBERGER. So that the amount of fighting we will do with these French guns with different ammunition from ours will not be great?

Col. RICE. Not for the light gun, no. I do not think the difference in the ammunition is absolutely vital, of course, because we would not be using the French ammunition at all if it were, but it is quite an important item and the change has given us a better ammunition: it has given us uniform ammunition, and it has not been a serious matter. It has not cut any figure at all so far as our troops going to Europe is concerned. It has cut some figure in the training, but that has not been serious.

Mr. SHALLENBERGER. You think, then, we have a sufficient capacity for the manufacture of our own ammunition to supply those guns, as I understood you to say? Of course, that looks like I am duplicating that question, but I understood you to say that in your opinion there not sufficient capacity at present to furnish all the ammunition for the small arms that we need, and that we have got to enlarge that capacity.

Col. RICE. To cover future needs. We have enough for the present.

Mr. SHALLENBERGER. Yes; when we are not fighting, but when we get into real war, with the tremendous amount that will be required, do you think we will have to enlarge our capacity? Do you think we will be able to reach that period of manufacture by the time we need the ammunition?

Col. RICE. Unquestionably.

Mr. SHALLENBERGER. And you do not think there will be any shortage of ammunition because of this change in ammunition and not being able to get ammunition from our allies?

Col. RICE. I do not; no, sir.

Mr. TILSON. Colonel, before taking up the line of questioning which I mean to follow there is one question which has been suggested to be by another member of the committee. Your estimate in this item is based upon an army of 1,500,000 men, and the cost is so much, as indicated here and in your testimony?

Col. RICE. Yes, sir.

Mr. TILSON. If the Army is increased during the fiscal year for which we are appropriating, what will be the increase in the amount of money required or the number of guns required? That is, how much, for instance, per 500,000 men should this amount be increased so as not to leave us with a deficit at the end of the year or in the middle of the year?

Col. RICE. \$148,000,000 for every 500,000 men.

Mr. TILSON. And that would be so if it were an increase of 500,000 men or 1,000,000 men or 1,500,000 men, approximately?

Col. RICE. I think it could be reduced perhaps fifteen or twenty million dollars per 500,000 men if we provided all at once for 1,500,000.

Mr. TILSON. Gov. Shallenberger has covered very thoroughly the question of the total cost and comparative cost of these various guns, and I wish to ask a few questions in regard to the comparative performance of these guns or their utility for the various purposes for which they are going to be used. First, taking the aircraft guns, what type of gun do you contemplate using principally in the aeroplanes?

Col. RICE. There are two types of aeroplane guns. One is the synchronized gun, which fires through the blades of the propeller—

Mr. TILSON (interposing). What make of gun are you planning to use as your synchronized gun?

Col. RICE. We expect to use primarily, when we can get what we want, two types—Vickers guns, or as many as we can get, and the Browning aircraft gun, which is the Browning heavy gun without the water cooling. We are now using the Marlin aircraft gun, which is a modification of the old Colt gun, and which we have been able to get much more promptly and in larger quantities.

Mr. TILSON. In other words, the Marlin gun is now under production?

Col. RICE. Yes, sir; we have 23,000 under production.

Mr. TILSON. The Browning gun is not under production?

Col. RICE. It is not coming through in quantity.

Mr. TILSON. That is what I mean by production. I do not mean hand-finished guns, but I mean those that would come in mass production, with the proper gauges and everything to make them in mass production instead of one at the time. Now, you expect that gun to be synchronized?

Col. RICE. It has been synchronized. The model guns have been synchronized, and we know that it is satisfactory in that respect.

Mr. TILSON. You spoke yesterday of the Lewis gun being used as an aeroplane gun. Now, you do not mean that to be used as a synchronized gun, do you?

Col. RICE. No, sir; they will be used in aeroplanes in which we have two men. It is called a flexible gun, and it is operated by a second man, not the pilot. The synchronized guns primarily are used where there is only one man, and that gun is fired through the propeller blades. The Lewis gun is not a synchronized gun.

Mr. TILSON. And it can not be synchronized owing to the manufacture or mode of operation? It can not be synchronized?

Col. RICE. In its present form it does not adopt itself to synchronization.

Mr. TILSON. That is a very long complicated question, covering details of manufacture.

Col. RICE. I think I can give a simple explanation of it: The propeller blades revolve very rapidly, and when you shoot through the propeller blades the time intervals between the trip of the sear of the gun and the arrival of the bullet at the plane of the propeller blades must be very short and very uniform. The result is that the gun in which the movement of the firing pin is very small, or, in

other words, in which the firing pin is moved forward to strike independently of the general mechanism, can be synchronized. The shortness of time in that case reduces the variation in the time between the firing or pulling of the trigger and the arrival of the bullet in the space between the propeller blades. In those guns in which the whole mechanism causes the firing pin to move forward with what we might call the bolt action several inches, as in the Lewis gun and in some of the others, such as the Benet gun, the time movement from the tripping of the sear and the arrival of the firing pin is sufficiently great, or the variations in that time are so large, due to differences in lubrication, heat, etc., that they sometimes shoot up the propeller blade even with the best adjustment that they can get.

Mr. TILSON. As a matter of fact, the Marlin aircraft gun has been thoroughly synchronized?

Col. RICE. Yes, sir.

Mr. TILSON. What about its rapidity of fire?

Col. RICE. It is about normal.

Mr. TILSON. As a matter of fact, is it not very fast? My information is that the Marlin aircraft gun is a very fast firing gun, and, as I understand it, rapid firing is the principal thing in the aeroplane service.

Col. RICE. I do not remember the exact rate of fire, but there has been no particular comment made on it by any testing board or any other agency connected with the determination of whether it shall be used, so it is not a salient feature.

Mr. TILSON. I know that it is a very rapid-firing gun. Now, the light type Browning gun is not used for aeroplanes?

Col. RICE. It is not. At present we are not intending to use it for that purpose.

Mr. TILSON. Now, in reference to the belt used in the aeroplane guns: In the Lewis gun you use a band which carries 47 cartridges, and if that gets jammed it does not function properly. Now, in the aeroplane service it does not get jammed, and that is one reason, as I understand it, why we can use the Lewis gun in aeroplanes very successfully. But in using the belt, I am told that there is difficulty in using the web belt that trails out behind. Have you had any difficulty with that?

Col. RICE. We normally do not use a belt, but we use what we call a disintegrating link mechanism, each one carrying a bullet or cartridge. They are linked together with the cartridges so that when you fire or when you extract a cartridge from it you drop a link.

Mr. TILSON. What is the cost of those plated belts as compared with the web belt?

Col. RICE. I can not give you the figures on that, because we have not made them in quantity.

Mr. TILSON. They are making them in quantities to my knowledge.

Col. RICE. We are trying to, but have not gotten deliveries in quantity yet.

Mr. TILSON. I know one concern that is making millions of them.

Col. RICE. Not for us.

Mr. TILSON. Yes; for the Government.

Col. RICE. We have given manufacturing orders, but they are not making deliveries, and we have not determined what is a reason-

able price for them. I will check the matter up, however, and if there is any price on them, I will put it in my hearing. I think the metal belts will be more expensive. The Worcester Pressed Steel Co. state that eventually they hope to produce metal belts at an outside price of 1½ cents per link, or \$3.75 for 250.

Mr. TILSON. It is believed that the cost will not be very much above that for the linen belts, and that its superiority for the aeroplane service is very great on account of the fact that the disintegrating mechanism does not interfere with the propeller.

Col. RICE. We are doing our best to get experts from France to come over here to help us make them, because we have not been entirely successful up to the present moment in being assured——

Mr. TILSON (interposing). I have seen them tried.

Col. RICE. In experiments; yes, sir. We have been experimenting with the Marlin aircraft gun and the Vickers aircraft gun with those links, but we have not been entirely successful up to the present time with our manufacture.

Mr. TILSON. Now, in regard to the Vickers gun: You stated that it was very difficult of manufacture, and for that reason it has been so slow. Is that due to difficulty in manufacture?

Col. RICE. That is one of the principal reasons.

Mr. TILSON. It has been provokingly slow in being delivered.

Col. RICE. Exceedingly slow; yes, sir. The same experience has been had in England in making the Vickers gun. The Vickers people themselves put up another plant for the purpose of producing that gun, but their deliveries have never been satisfactory or up to their expectations.

Mr. TILSON. Have deliveries been made on the orders that we gave some two years ago, in 1915? Have they been delivered?

Col. RICE. Yes, sir. That was an order for only 125. They were delivered in July, 1916.

Mr. TILSON. And of the 4,000 we ordered——

Col. RICE (interposing). About one-half of them have been delivered. The order was given in December, 1916, and about half of them have been delivered now.

Mr. TILSON. Are they able to get by that difficulty by the preparation of a large number of special tools, so that they can manufacture them in mass production, or are they practically a hand-finished product, and must the production be slow by reason of the nature of their construction? In other words, is it a gun that we can reduce, like we have some others, to mass production?

Col. RICE. I doubt it. I do not think anybody has done it up to the present time.

Mr. TILSON. In the matter of the Browning gun, have we taken steps to simplify that gun from the manufacturer's standpoint, instead of making of it a toy or plaything, so that it can be produced in mass quantities?

Col. RICE. Yes, sir.

Mr. TILSON. How many concerns are making those guns?

Col. RICE. Four.

Mr. TILSON. But we have not yet really arrived at the stage of production—that is, we have not finally settled on all the types of guns, have we?

Col. RICE. We have not yet begun to produce them in quantities.

Mr. TILSON. Realizing that it is more important to get the thing absolutely right and then make large preparations, rather than to go ahead and make a few guns now. It is better to prepare to make a large number of guns when we begin and have them correct, from the manufacturer's standpoint.

Col. RICE. We will lose a little time by making thorough preparations in the beginning for a large production, but we gain tremendously in a very short time by making those preparations.

Mr. TILSON. There is one more question with reference to the Vickers gun: Have we made any Vickers guns for any of our allies?

Col. RICE. The Colt Co. has made 3,000 guns for Russia.

Mr. TILSON. Have we made any for the French aeroplanes?

Col. RICE. We have turned over to them 1,000 of the guns that we made for ourselves.

Mr. TILSON. Are they able to synchronize those guns and use them in aeroplanes as we do?

Col. RICE. Yes, sir.

Mr. TILSON. Have we received in exchange any guns from France?

Col. RICE. Yes, sir.

Mr. TILSON. What guns have we received?

Col. RICE. We have received the heavy Hotchkiss.

Mr. TILSON. Is there any gun known as the Schneider gun?

Col. RICE. I do not know of any such gun. There is a large ordnance concern in France known as the Schneider company, and, in fact, it is the largest ordnance factory in France, but they have no machine guns, to my knowledge. They work on larger stuff. There is a light Hotchkiss gun and a heavy Hotchkiss gun.

Mr. TILSON. Now, coming to the bullets for the various purposes, what bullet are we preparing to use in the aeroplane gun—the same cupro-nickel jacket bullet we use in the land service?

Col. RICE. We will use the same ammunition, except that it will be very much more carefully inspected, and will, in addition to the ordinary inspection, be gauged for head space, or for thickness of head, tapering, and all that, so as to avoid as far as possible any jamming difficulties due to defective ammunition.

Mr. TILSON. What about supplying the ammunition that we will use in the Chauchat guns and Hotchkiss guns of French caliber while we are using those guns and before we change to the American caliber?

Col. RICE. The original supply has been furnished by the French, and we are also manufacturing it in this country.

Mr. TILSON. Is there any great difficulty in manufacturing the French copper bullet, or the bullet that the French use?

Col. RICE. If there is, I have not heard of it.

Mr. TILSON. Is it not more difficult, from our American manufacturers' standpoint, to produce that French copper bullet?

Col. RICE. I have no information that there is any greater difficulty with them than with other types of ammunition. However, the ammunition work is not in my division.

Mr. TILSON. They are making some of it in my State. They are making some of those copper bullets, and they find it a difficult bullet to make. That question has arisen, and, therefore, I wanted to ask

whether you think it possible to use brass for that purpose instead of copper?

Col. RICE. I would not be willing to answer that question without making a long series of experiments.

Mr. TILSON. As a matter of fact, that question probably has been put up, perhaps not to the Ordnance Department officially, but it has been put up to some officers, and I believe they are preparing to test out the performance of a brass bullet for the French calibers.

Col. RICE. I should expect that to be the case if there is any difficulty in the copper bullet itself.

Mr. TILSON. It is an alloy, I understand. It is not solid copper, but there is a little lead in it. It is a pretty difficult bullet to make. Now, what are they using in Germany? Beginning with ammunition first, do you know about their bullet for aeroplane guns?

Col. RICE. Their bullet is very much the same as ours. I am not absolutely certain whether it is a cupronickel bullet or a steel bullet with a cover somewhat different from ours, but it is very much like it. In fact, our bullet was modeled on the German bullet originally.

Mr. TILSON. Yes; apparently it was.

Col. RICE. They have what they call the "S" bullet, which was made early in 1905 or 1906.

Mr. TILSON. I was trying to get at this question, whether Germany had the same cupronickel jacket bullet that we had prior to the war and whether they had ceased from any industrial reasons to use the cupronickel jacket and had turned to the solid steel jacket. The question is if they have done so, for what reason did they do it?

Col. RICE. I can not tell you that.

Mr. TILSON. I have in my hand a German aeroplane bullet, which is a copper-plated affair. Is it not a fact that copper is necessary to serve as a lubricant in the penetration of armament? Is not our cupronickel jacket bullet sufficient to penetrate armor?

Col. RICE. For armor-piercing qualities we make a special bullet, as do the Germans.

Mr. TILSON. Do you plate it with copper?

Col. RICE. The armor-piercing bullet that we are making is a steel core with a cupronickel jacket of a somewhat different kind.

Mr. TILSON. Is it intended to make a distinct bullet for the aeroplane service, or a different one from the general run of ammunition?

Col. RICE. No, sir; not for the aircraft service; but if the demand of the aircraft service for a bullet of armor-piercing qualities—that is, a bullet particularly for the aeroplane guns—is sufficient to justify it, they will undoubtedly have a bullet for that purpose.

Mr. TILSON. I was trying to arrive at information as to what the Germans had done in the first place, from such information as we have been able to get from them, and, in the next place, the reasons for their doing it, and if there were any reasons for our doing the same thing or something like it. Now, it is a fact that they are using armor-piercing bullets in their aeroplanes. Aeroplanes have been driven down inside the allies' lines that carried machine guns with this particular type of bullet. My query goes to the point of

what we are doing in that direction, or whether we will do anything along that line.

Col. RICE. I have not heard of any intention to use armor-piercing bullets specifically in the aeroplane service, but bullets of armor-piercing quality can be used in them if it is found desirable to do so. I am sure we have had no demand from the Aviation Service for it as yet.

Mr. TILSON. There is another question I want to ask you in regard to the Chauchat gun. You spoke yesterday about this gun being manufactured in France, or said that they were preparing to manufacture it in France in quantities. Now, are they furnishing a sufficient supply of those guns, along with the Hotchkiss gun, to supply the needs at present in France?

Col. RICE. Yes, sir.

Mr. TILSON. Do you understand that they are going ahead with the necessary changes for using the American caliber of bullet?

Col. RICE. We expect to begin to get them some time this month.

Mr. TILSON. So that they will be able to make them in sufficient quantities to supply our needs?

Col. RICE. Yes, sir.

Mr. TILSON. Is there any intention to manufacture the Chauchat gun in this country at all?

Col. RICE. No, sir.

Mr. TILSON. And what you have said in regard to the Chauchat gun would apply to the Hotchkiss gun so far as being furnished by the French and being replaced by French guns to shoot American ammunition?

Col. RICE. The heavy Hotchkiss gun is not being chambered for American ammunition.

Mr. TILSON. What will we use, the Vickers and heavy Browning?

Col. RICE. Yes, sir.

Mr. TILSON. Has there been any effort on the part of the French to have us use their bullets or ammunition for our aeroplane machine guns indefinitely?

Col. RICE. No, sir; not that I know of.

Mr. TILSON. Was there any such effort on the part of the British? Did not the British ask us to use their ammunition entirely?

Col. RICE. The British were more inclined to be insistent that we use their calibers and their ammunition than the French. The French never took that point of view in regard to small-arms ammunition. They felt that we should use our own ammunition.

Mr. TILSON. There has been some criticism of the Ordnance Department for not using the British caliber ammunition. One New York newspaper has been rather insistent in its advocacy of that thing. Now, there were good reasons why we adopted American ammunition rather than British, were there not, from the ordnance standpoint?

Col. RICE. Yes, sir; there were excellent reasons.

Mr. TILSON. Both on account of the superiority of the bullet itself, or of the cartridge itself, and also on account of our preparations for making it here?

Col. RICE. Yes, sir; and the ammunition, as I said a moment ago, was very much better than the British. It is similar to ours, but

they had the old ammunition with the blunt-pointed bullets, which they had before the war and were preparing to discard, but could not discard in the throes of war. In addition to that, we have very considerable quantities of Springfield rifles on hand with our own ammunition for them, and we are manufacturing them continuously. So that if we had adopted the Enfield rifle, which, I think, you have in mind principally—

Mr. TILSON (interposing). Yes.

Col. RICE. We would necessarily have had two kinds of ammunition in our service. Now, the delay which was caused in changing over the Enfield rifle to take our ammunition was unimportant. It did cause some little delay in getting some guns in the hands of troops in training, but their preliminary training without guns was proceeding properly. So that the amount of time lost was not very material. The French and English do not use the same ammunition. So there seemed to be no sufficient reason for adopting their type of ammunition. You will, of course, realize that there has been a very strong pressure from England and a very strong pressure from the French that we should adopt their material of every kind.

Mr. TILSON. I am convinced myself that there were the best of reasons for adopting American ammunition. I went into it rather thoroughly myself, being rather inclined the other way at the beginning, but after giving it a good deal of study from every viewpoint I became convinced that the decision of the Ordnance Department was absolutely correct in regard to this ammunition. Now, there is just one more question: What is being done in the department to get automatic or semiautomatic guns even lighter than the Browning or any of the others?

Col. RICE. We have tests of guns of that type manufactured by the Winchester Co. and manufactured by the Remington Co. We have cabled to France to find out whether they want such a gun; and if so, what type they prefer. There are a good many of those guns being made now, and we have asked them, if they want such a gun, to specify the type that would be preferred.

Mr. TILSON. How light are any of those guns?

Col. RICE. They are quite short and quite light. I do not remember what the weight is, but I should say probably not more than 9 or 10 pounds.

Mr. TILSON. I was present at Springfield two weeks ago at the testing of a gun exactly of the weight of a Springfield rifle. It was put on a Springfield barrel and a Springfield stock, and it was absolutely like a Springfield except as to the internal mechanism. That was the preliminary test but not the final test. They seemed to be very much pleased with the performance of the gun from every point of view. Col. Pierce said that oftentimes they had guns brought in there that would stand the strain of the ordinary subservice ammunition, but that when they came to the full service charge they would not stand; that is, that those lighter guns would not stand. That has been the rule as to those guns that have been brought in there. This gun was tested with service ammunition and stood up quite well, so I suppose they are working along that line to try to develop an automatic shoulder rifle.

Col. RICE. I misunderstood your question, sir. The answer I gave referred to a very different type of gun to be used in aeroplanes only. The gun you speak of is an automatic shoulder arm for use on the ground, I take it.

Mr. TILSON. Yes; the same as the shoulder rifle.

Col. RICE. And is a much more powerful weapon than the gun I spoke of that we were considering for use with the aeroplanes.

Mr. TILSON. Colonel, in the Senate investigation they brought out, according to the papers, a great want of machine guns for training purposes in the camps. Has there been such a lack of machine guns for training in the camps?

Col. RICE. There has been some lack of machine guns. We have something over 7,000 now which are either in camps or available for putting in the camps and en route, which is really quite sufficient for the purpose.

Mr. TILSON. When I was at Springfield, a short time ago, I got the impression they had quite a supply of those guns on hand—perhaps 1,000 or 1,500 machine guns. That was in November, and I know just shortly before that time there was a great cry which come up from our local camp in Connecticut, in which there was a machine-gun battalion which did not have a single machine gun in it. Not a man in it had had a machine gun in his hands before they started for France.

Col. RICE. You know what the situation is in regard to shipments, and I think some of the shipments have been on the road for as much as several weeks. We did not have them as promptly as we would like to have had them. There is no question about that.

Mr. TILSON. Are a number of them stored at Springfield?

Col. RICE. Yes, sir.

Mr. TILSON. What are they—the old Colt?

Col. RICE. A small number of the old Colt and some of the Lewis.

Mr. TILSON. Has not the Marlin Co. a number of the Colt improved by Marlin?

Col. RICE. No.

Mr. TILSON. I was informed they had some 400 or 500 of those on hand.

Col. RICE. No; the guns they have on hand, as I understand it, which have not been purchased, are the old clapper-type Colt.

Mr. TILSON. In regard to that synchronizer, what type of synchronizer are we preparing to use?

Col. RICE. There are several different types.

Mr. TILSON. As I recall, they are two distinctly different types: there is the mechanical and the hydraulic.

Col. RICE. Yes: the Marlin gun has been particularly synchronized, in the first place, to the hydraulic, and so has the Browning. I think they have both been synchronized to both types.

Mr. TILSON. I am sure the Marlin has been synchronized to both types, and the Browning is susceptible of being synchronized to both types.

Col. RICE. Yes.

Mr. TILSON. Which do you regard as the best means of doing it—by the mechanical or by the hydraulic?

Col. RICE. I have not gone into it sufficiently to really express an expert opinion; but I think probably the hydraulic is better.

Mr. TILSON. Although the mechanical is the more direct?

Col. RICE. Yes; and easier. There probably will be less lost motion in the hydraulic than in the other, and therefore less opportunity for variation.

Mr. QUIN. Colonel, have you plenty of supplies, such as the nitrates and other component parts, to make ammunition?

Col. RICE. I think there is some possibility of shortage later on.

Mr. QUIN. How late?

Col. RICE. I can not give you the details, because that is not within my line of work, and I have not the exact information.

Mr. QUIN. Who would be the officer to give that information?

Col. RICE. Col. Joyes knows about the nitrate situation and Col. Hoffer would know about the powder.

Mr. QUIN. All of this type of ammunition that Mr. Tilson asked you about is being manufactured in ample quantities, according to the way the guns come out, I take it?

Col. RICE. Yes, sir.

Mr. QUIN. There will be no danger of any shortage of ammunition for any of the types of gun, either machine guns for the aeroplanes or machine guns for use on the ground?

Col. RICE. I do not anticipate any; no, sir. Certainly there is no immediate prospect of it. If there is any shortage at all it will probably be in the components for the heavy types, such as field artillery.

Mr. QUIN. Is there any truth in the statements we see published in the papers that you have not had machine guns for these different cantonments for the machine-gun companies, and so on?

Col. RICE. They had none of the late types until September or October, and mostly not until November. The National Guard troops and some of the Regular troops had some of the guns of the type which they had in their possession before the war started—the Benét-Mercié and the Lewis, chambered for British ammunition.

Mr. QUIN. Are they now supplied with the necessary machine guns for training?

Col. RICE. Yes, sir.

Mr. QUIN. There will be no danger in the future of that mistake occurring?

Col. RICE. From now on they will all have some machine guns for training.

Mr. SHALLENBERGER. Colonel, I understand that the troops in France, none of them, have our American machine guns. They are supplied with the different types of French guns?

Col. RICE. That is correct.

Mr. SHALLENBERGER. You took no American guns over there?

Col. RICE. We took a few that we could scrape up. They were second hand, in that they had been used mainly, and they were not used over there for the troops themselves.

Mr. SHALLENBERGER. And the guns they have are the heavy Hotchkiss and the light Chauchat gun?

Col. RICE. Yes.

Mr. GORDON. Under the present plan I believe you recommend in this bill appropriations for men and material for an army of 1,500,000 men?

Col. RICE. This is completing that appropriation; yes, sir.

Mr. GORDON. How many machine guns are required to equip those in the proportion which the present plans of the military authorities provide?

Col. RICE. This program provides for a total of 230,000 guns of all types and for all purposes, not only for the equipment of divisions on the ground but for the entire aeroplane service.

Mr. GORDON. What I am trying to get at is what proportion of those are for the regular machine-gun units attached to the Army?

Col. RICE. It is a good deal less than half.

Mr. GORDON. Can you not tell the number per regiment?

Col. RICE. Yes, indeed. There are 224 heavy machine guns in each division and 758 light guns in each division, without any replacements.

Mr. GORDON. How many would that make in an army of 1,500,000 men?

Col. RICE. Approximately 30,000 guns, heavy and light together, without any allowance for replacement, and we figure 50 per cent replacement on the heavy guns and 100 per cent on the light guns.

Mr. GORDON. Then it would be 30,000 guns for the whole Army as at present authorized, and out of that you leave 180,000 to be used elsewhere without replacement?

Col. RICE. We do not quite count it in that way. We count that the replacements have to be available.

Mr. GORDON. And how many do you compute for replacements?

Col. RICE. Fifty per cent on the heavies and 100 per cent on the light. That makes about 45,000 of the light and about 14,000 of the heavy.

Mr. GORDON. That includes replacements?

Col. RICE. That includes replacements; yes, sir.

Mr. GORDON. Where do you expect to use the others?

Col. RICE. On the airplane work, mainly. Then there are various incidental purposes, such as the lines of communication, depots, aircraft, use in tanks, and all sorts of things.

Mr. KAHN. Armored cars?

Col. RICE. Yes, sir.

Mr. GORDON. What proportion of those are for the airplane service?

Col. RICE. For the purpose of figuring, taking the basis as 230,000 guns, about 110,000 for the airplane service.

Mr. GORDON. And can you state approximately where the others are intended to be used?

Col. RICE. We have a very considerable number used in the coast defense.

Mr. GORDON. How many for the coast defense would you say, approximately?

Col. RICE. About 1,400. For miscellaneous uses we have about 3,000. Both of those should be increased by 50 per cent. On miscellaneous uses, of the light type, we have something like 14,000 assigned.

Mr. GORDON. Fourteen thousand?

Col. RICE. Yes. If you want a statement of exactly how that runs, I will give it to you.

Mr. GORDON. I will be glad to have it.

Col. RICE. It is figured in this way: Of the heavy type guns in companies, 12,096; coast defenses, 1,398; miscellaneous, 2,863; total, 16,357; 50 per cent wasted, 8,179; making a grand total of 24,536. Of the light type, in companies, 41,472 plus 100 per cent wastage, 41,472; miscellaneous, 13,792; making a total of 96,736. Of the aviation types, fixed guns, 53,000, fixed guns to meet possible replacement purposes of some of the older types; the Marlin aircraft, 10,000; flexible guns, 20,000; making a total of 84,000. Light automatic machine rifles for aviation purposes, 25,000; making a total of 230,272. Those are the figures upon which this particular estimate, which was made last year, was based.

Mr. GORDON. Do you know whether or not any of the estimates you have made have been duplicated by the Signal Corps?

Col. RICE. I do know. The Signal Corps included in their \$640,000,000 appropriation \$24,000,000 for machine guns, which was transferred to the Ordnance Department and is included in the total in this estimate.

Mr. GORDON. And you undertook to estimate for all the machine guns necessary for the aviation service for the coming fiscal year?

Col. RICE. Yes, sir.

Mr. GORDON. So that it would not be necessary for us to consider any estimates by the Signal Corps for machine guns?

Col. RICE. It would not. They will probably ask you for money for synchronizing connections. The division of work between the two departments is that we furnish the machine guns ready to put into the areoplanes, arranging for adjustment of the synchronizing device, and the Signal Corps develops and furnishes the synchronizing device which really is considered to be a part of the aeroplane rather than a part of the gun.

Mr. GORDON. By synchronizing you mean to cooperate the use of the machine gun with the propeller so there will not be a collision between the two?

Col. RICE. So that when the propeller is going and you fire, the bullet will pass between the blades and not hit the blade.

Mr. GORDON. A rather delicate operation, I should assume?

Col. RICE. It is right difficult.

Mr. TILSON. I understood you to say something about replacing a certain number of older type aerial guns, and you mentioned the Marlin aircraft.

Col. RICE. Yes.

Mr. TILSON. I thought you told us yesterday you had ordered 23,000 of the Marlin aircraft guns.

Col. RICE. We have; yes.

Mr. TILSON. Is that of a new type?

Col. RICE. No, sir; that is the same one I was talking about. When this estimate was made, which was last summer, in June, we had expected at that time to provide for 10,000 Marlin aircraft, and we also expected we would probably have to replace them, which may yet be the case. You understand the Marlin aircraft gun is purely

a stop-gap gun; that is to say, we are buying them because they can be used and because we can get them.

Mr. TILSON. You do not regard them as being as good as the heavier types?

Col. RICE. No. They are not considered at the present time to be anything like as good as the Browning, and we expect in the end we will have to replace them with Brownings. That may not be the case, but we did include in this estimate funds for replacing those 10,000 guns.

Mr. TILSON. The same concern is making both guns, and I suppose the company probably would not care which one they made. I was of the impression that the Marlin aircraft gun was really a very effective gun, a very rapid firing gun and one easily synchronized, and the idea of replacing them seemed rather strange to me.

Col. RICE. If it proves to be as good as we would like to have it we will not replace it. We will use the money for buying other guns or return it to the Treasury.

Mr. GORDON. What is the estimate of the cost of these machine guns for which you have estimated this \$230,000,000?

Col. RICE. I am going to put in a table which will show that in detail.

(Inserted in earlier part of hearing.)

Mr. GORDON. Will it also include the ammunition?

Col. RICE. No, sir; not the ammunition.

Mr. GORDON. Have you made an estimate as to the cost of the ammunition for supplying these guns?

Col. RICE. There is such an estimate, and I can put it in the record if you would like to, although I think Col. Thompson testified on that score.

Mr. SHALLENBERGER. I would like to ask one further question on the matter of expense. The appropriation asked for in this bill of \$237,000,000, I understood you to state, does not contemplate the purchase of any more guns, but is to pay for completing the contracts already made; is that the case?

Col. RICE. And for procuring spare parts and some other things that have not yet been ordered.

Mr. SHALLENBERGER. But it does not contemplate increasing largely the number of guns. What I would like to know is whether this large amount of money is required because you bought more guns than was originally contemplated or because of the fact that you failed to estimate properly the cost of the entire program? Is it because you had to increase tremendously the number of guns which you expected to buy when you came in with your estimate only last summer?

Col. RICE. As compared with what time, Governor?

Mr. SHALLENBERGER. With the amount of money which was appropriated for 1918 you have already purchased or laid out orders for your entire program of 230,000 guns. If you contemplated that number of guns when you asked for that amount of money, how is it you are now asking for \$237,000,000 more, which must practically be a deficit rather than a new program? In other words, it is to complete the program which you laid out last summer?

Col. RICE. There is no deficit.

Mr. SHALLENBERGER. What I am getting at is why you have to come now and ask for \$237,000,000 more to complete your program, when you must have had that program in mind when you asked for the appropriation of last year, which you got largely, of course, from the other committee.

Col. RICE. Perhaps it would be best to explain it by going back to the beginning of the appropriation for the war. We had \$12,000,000 from the bill approved August 29, which was invested in Vickers guns and some Lewis guns. We then got \$7,500,000 appropriated by the act of May 12 from this committee. That was also put into Lewis guns and others. Then, as soon as war was declared, we put in an estimate of \$65,900,000, which was granted. That estimate was prepared in a very few days and was based on the original program before the war.

Mr. CALDWELL. What has become of that money? Has that all been used?

Mr. KAHN. You say a program that was adopted before the war?

Col. RICE. Yes, sir.

Mr. KAHN. Did you intend to use that great amount of money for supplying automatic machine guns in time of peace?

Col. RICE. Yes, sir. We had a program extending over five years, you will remember, and there had been appropriations made for part of that before the war began. Therefore, when the war came and we were called upon to submit an estimate overnight, almost, we simply submitted an estimate for the completion of that project, pending the submission of additional estimates, and that was for \$65,900,000, which was appropriated in the act of June 15.

Mr. SHALLENBERGER. And that has all been spent?

Col. RICE. If I may finish my statement about the money, then I will explain in regard to the items.

Mr. SHALLENBERGER. Yes.

Col. RICE. Then, when the tests in May were held and the report went to the War College, there was a very large increase in the program. We then submitted an estimate for \$194,277,000 to meet that, including aircraft requirements, which had then begun to be considerable. There was a further increase shortly after that in the program—very considerably—on account of aircraft requirements, which were again very largely raised. We submitted a supplementary estimate for \$188,000,000 to meet that. Now, all of those appropriations taken together cover the 232,000 guns we have been talking about.

Mr. SHALLENBERGER. But it does not pay for them.

Col. RICE. Oh, yes.

Mr. SHALLENBERGER. We voted you \$291,000,000 prior to this bill for machine guns. Now, since that money was appropriated and before you get this other money, you have made contracts, as I understand you, for 230,000 guns, we will say, in round numbers. Now, in order to complete and pay for all of those guns and their accessories and to complete your program you request in addition \$237,000,000. In other words, we are appropriating now for the year beginning the 1st of next July; but I understood you to state that that did not contemplate that you were going to buy new guns with that money, but you are going to pay for the guns which are in the pro-

gram. What I want to know is how it occurs that apparently you require \$237,000,000 more to complete the program which was laid out when the other appropriation was made.

Col. RICE. Those figures which I gave you we asked for, and of that \$168,000,000, the last figure I mentioned, \$118,000,000 was not appropriated but was given as a contract authorization.

Mr. SHALLENBERGER. I see; we did not appropriate the money!

Col. RICE. No, sir; and as to that \$118,000,000 I am now coming to you and asking for cash in place of the authorization. In addition to that, the remainder of the \$237,000,000 which we are asking for at this time is for maintenance and not for new equipment, so that all of those amounts taken together provide for 230,000 guns and their maintenance through the year 1919.

Mr. SHALLENBERGER. It was not then that you underestimated the number of guns or that you underestimated the amount they were to cost, but that you have added the maintenance of those guns and the necessary reserves which require this additional money; is that the explanation?

Col. RICE. Yes, sir; to complete the program as already provided by Congress and to provide for maintenance.

Mr. SHALLENBERGER. The point which I had in mind, Colonel, and which you have now made plain to me and I hope to the rest of the committee, is that ordinarily we would be expected to be appropriating in this bill for supplies to be furnished next year for another program of guns or rifles, but apparently this is largely to carry out the program laid out in the last appropriation bill.

Col. RICE. The instructions of the Secretary of War in regard to the regular estimates for the year 1919 were that they should not provide for the year 1919 were that they should not provide for more than 1,500,000 men, and we had already provided for them in these other appropriations and authorizations, except for the maintenance item, so that we did not have to ask in this bill for any additional original equipment.

Mr. CALDWELL. Right in that connection, when you get this money which you are now asking for, you will have money enough to pay for all of the machine guns you will need, and their repair and maintenance for 1,500,000 men?

Col. RICE. That is correct.

Mr. CALDWELL. If the program before the end of the fiscal year we are appropriating for now takes in 3,000,000 men you will have to have as much again as you have received in the last three bills and this bill combined, will you not?

Col. RICE. We will, except that the maintenance will probably not be repeated.

Mr. CALDWELL. So that if the number is increased to 3,000,000 men you will want approximately, in addition to what you are asking now, how many million dollars?

Col. RICE. Roughly, you can add \$148,000,000 for each 500,000 men.

Mr. CALDWELL. Colonel, where are you storing all the machine guns and the ammunition for them, and the spare parts and all the material which you are now buying?

Col. RICE. We are using to a certain extent the arsenals, but we are building and acquiring, by rental or otherwise, large numbers of storehouses all over the country.

Mr. CALDWELL. Did your department have anything to do with this storage plant which they have near Newark?

Col. RICE. Not to my knowledge.

Mr. CALDWELL. Are you storing any of your material there?

Col. RICE. I could not answer definitely, that being not within my department.

Mr. CALDWELL. Do you specify the character of guns being used by the Signal Corps, or does the Signal Corps make a requisition on you for a particular type of gun?

Col. RICE. That is the rule. We come as near as we can to furnishing the kind of gun they want, but it is usually a matter for agreement between their officers and ours. Our machine-gun people and their aircraft people are working together all the time. They formally ask for the guns——

Mr. CALDWELL (interposing). In using that term "formally," what do you mean?

Col. RICE. I mean they submit official applications for the guns they need; but, preliminary to that, there is a great deal of coordination between the two departments in determining what we can furnish that will meet their needs.

Mr. CALDWELL. Have you a board for that purpose, or a fixed board that works all the time?

Col. RICE. We have no fixed board, but we have a certain number of officers whose business is that, and that only, for each department. When it comes to any question of difficulty, there is a board appointed for that purpose and it is taken up in consultation with the heads of the departments.

Mr. CALDWELL. Has there been any friction or dispute about it?

Col. RICE. There have been some minor questions raised, but not enough to amount to anything.

Mr. CALDWELL. How have they been resolved, in favor of the Signal Corps or the Ordnance Department?

Col. RICE. Usually by each one giving something. If there comes up a question, for instance, of what you will do with guns, whether you will give them to the Signal Corps or to troops on land, there is apt to be a difference of opinion, and in that case we form a committee, including the General Staff. We had one case where there was a question of making a recommendation as to the disposition of guns that we expected to be available, and there was an officer who was on the War Industries Board, an officer of the General Staff, two officers from the Signal Corps, and two officers from the Ordnance Department who got together and made up a program. That was submitted as a War College memorandum to the Chief of Staff and was approved by the Secretary of War, and that is what we are operating under at present. There was no serious difficulty in coming to an agreement at all.

Mr. CALDWELL. Do you use any type of gun that shoots through the propeller shaft?

Col. RICE. On the ground?

Mr. CALDWELL. Do you use a type of gun that shoots through the propeller shaft?

Col. RICE. Yes, sir. We have two—the Marlin aircraft gun and the Vickers gun, and we will use the Browning gun.

Mr. CALDWELL. Do they shoot through the propeller shaft?

Col. RICE. No, sir; we are not firing guns through the propeller shaft at all.

Mr. CALDWELL. That method is used to some extent by the French flyers, is it not?

Col. RICE. I am not very thoroughly informed about that. The Signal Corps has not cared to have that arrangement made, so far as I know.

Mr. McKENZIE. As the matter of the appropriation has been gone over very thoroughly by these other gentlemen, I will not ask you any questions about that. I want to ask you one of two questions, perhaps, to relieve my own mind, if I may. I have heard the different types of guns discussed here, and it is apparent that you are proceeding with the purchase and manufacture of at least half a dozen different kinds of automatic rifles. Now, I would like to ask why that is. Is it on account of the necessity of the case, or is it the view of the War Department that you can get better service from half a dozen different kinds of automatic rifles?

Col. RICE. There are several elements entering into it. The first is to utilize going concerns, as far as possible, if their guns are satisfactory for use. That saves a great deal of time, and time is the principal element at the present moment and has been ever since the war broke out. We had no machine guns, practically. We would not normally prefer to have a number of different types, but would prefer to get it down to two or three types, and some day we may be able to do that, but at present if the guns are serviceable for use and can be obtained, we have got to utilize the manufacturing capacity to supply them.

Mr. McKENZIE. Then it is on account of necessity rather than that you think it is better policy to have a number of different types in the service?

Col. RICE. We would like to reduce the types as much as possible.

Mr. McKENZIE. Of course, I am not a military man, but it does seem to me that if we had one type and if we could have the Army equipped with that one type of gun it would be better.

Mr. TILSON. Of course, if you mean by "one type" one make of gun, that is one thing, but if by "type" you mean the weight of the gun, we would want at least two and possibly three different weights of guns for different purposes.

Col. RICE. Yes, sir; and eventually we expect to have in the hands of our troops the heavy and light Browning guns. They are to be used for different purposes.

Mr. McKENZIE. I thank you for making that suggestion. Of course, I know the difference between heavy and light automatic guns, and know that both are necessary.

Col. RICE. We also have a third type, the Lewis gun, which is a very good flexible gun in the aircraft service. Those three guns, with the exception of those very light semiautomatic guns, ought to meet all of our needs.

Mr. McKENZIE. I want to ask one or two questions in regard to the matter of royalties paid. On yesterday, as I remember it, you stated that the royalty on the Lewis gun was \$100 per gun, and that Col. Lewis owns 43 per cent of the stock in that gun; you stated this morning and also yesterday that you had let a contract for 42,000 Lewis machine guns, and that the price was approximately \$780, if I remember it correctly.

Col. RICE. No, sir; the price is \$660 with the royalty and \$560 without the royalty. That is for the gun proper.

Mr. McKENZIE. If the royalty is paid, it will cost the Government \$660 apiece for those guns. Now, what I want to get at is the percentage of cost to the Government. One hundred dollars on \$560 would be about what?

Col. RICE. About 18 per cent.

Mr. McKENZIE. Now, then, if you let a contract at cost and 10 per cent, would the 10 per cent be figured on this \$100 royalty?

Col. RICE. No, sir.

Mr. McKENZIE. At any rate, it would cost the Government about 30 per cent, would it not, over the cost to buy these guns?

Col. RICE. No, sir; a little under 20 per cent, if we accepted that figure, which we are not doing.

Mr. McKENZIE. If that royalty is paid on the 42,000 guns, it will amount to \$4,200,000.

Col. RICE. Very much more than that, because we also pay royalty on the spare parts.

Mr. McKENZIE. I mean on the gun alone.

Col. RICE. Yes, sir.

Mr. McKENZIE. If Col. Lewis remitted his part of it, as I figure it, it would still cost the Government \$2,394,000 in royalty for the 42,000 guns. Now, I want to ask you whether or not, in the absence of any congressional action, the War Industries Board has absolute power to fix the price of royalties to be paid?

Col. RICE. The Secretary of War has that power.

Mr. McKENZIE. He has the power to fix it through the War Industries Board, or upon their recommendation?

Col. RICE. It is likely that he would do that; but he could fix it for any reason that suited him. The national-defense act gives the Secretary the power to determine what a reasonable price is, and if it is not accepted, then it becomes a matter of claim, of course.

Mr. GORDON. You do not mean to say that the Secretary of War can fix the amount of royalty?

Col. RICE. Yes, sir.

Mr. McKENZIE. Have you any further explanation to make in regard to that?

Col. RICE. I was going to say that the Secretary of War under the national-defense act, paragraph 120, has the right to place an order and fix a price as being reasonable. There is no question, of course, but that that price is subject to a later review by the courts, but he has the right to fix the price.

The CHAIRMAN. That section expressly says that the Government shall pay what is fair and just.

Col. RICE. Yes, sir. In this particular case the War Industries Board has been endeavoring to effect an arrangement with the Auto-

matic Arms Co. whereby they would accept \$1,000,000 on account of all claims for all guns ordered during the war. That, I think, is in a fair way to be arranged. At any rate, we are not paying \$100 per gun, or anything like it.

Mr. McKENZIE. Do you know what has been paid to the stockholders, outside of Col. Lewis, on account of the 57 per cent held by them?

Col. RICE. That has been paid, but it can be deducted from the total of \$1,000,000.

Mr. KAHN. With regard to the manufacture of these automatic guns, has your department made a survey of the possible factories in this country that can be utilized for turning out all the machine guns or parts of machine guns required in case this war should be a protracted war and we should require many more guns than you are now able to produce?

Col. RICE. Yes, sir.

Mr. KAHN. You have made such a survey?

Col. RICE. Yes, sir; and we have already started all of the manufacturers who have experience along that line, and we believe that we are developing a sufficient capacity so that, unless some very remarkable demands are made by the allies upon us, we can supply the machine guns, when we get to going full swing, faster than we can raise men.

Mr. GREENE. My questions, perhaps, may inadvertently cover some ground that has been gone over in your rather protracted hearing, but they are meant to sum up some of the statements that have been made so that I can get a proper view of what has been the result of your efforts thus far. As I understand it, up to this time you have been able to equip, either through purchases made here or in France, the troops that we have sent over to France?

Col. RICE. Yes, sir.

Mr. GREENE. That is, with all the ordnance that the department is expected to furnish?

Col. RICE. Yes, sir.

Mr. GREENE. Do you feel that you are at this time in such shape that as fast as successive contingents go from this country to France they will be likewise fully provided for?

Col. RICE. Yes, sir; either here or in France.

Mr. GREENE. So there is no immediate prospect of holding back any number of men from being sent to France because of the lack of ordnance supplies that ought to go with them?

Col. RICE. No, sir.

Mr. GREENE. And troops are not being held back because of the lack of such equipment?

Col. RICE. The only element in the time of sailing is the tonnage or shipping.

Mr. GREENE. And it is not for want of supplies?

Col. RICE. No, sir.

Mr. GREENE. So that, in that sense, you are quite confident of the ability of the department to keep pace with the movement of troops from now on?

Col. RICE. Yes, sir; taking into consideration the fact we are fortunately able to get large amounts from our allies.

Mr. GREENE. Is there any objection to stating for the record what that proportion appears to be—that is to say, are you furnishing machine guns for more than one-half of our troops, or do they expect to get more than one-half over there?

Col. RICE. We are furnishing certain things entirely rather than in proportionate shares of articles. They are supplying all of our machine guns and all our field artillery and a great part of our field artillery ammunition and some of our small-arms ammunition. That condition, of course, will gradually become less and less until we reach the point in our own production where we will replace it entirely and probably supply them with certain things that they are not equipped to produce, such as propellants and explosives.

Mr. GREENE. There is no apprehension that they will break down in their supply systems before we are ready to supplement them?

Col. RICE. There has been a conference held with Gen. Bliss and other representatives on the mission headed by Col. House that has been to Europe with that idea particularly in view, and a program has been drawn up which has as its basis the understanding that the French and English Governments will not be hampered in that respect.

Mr. GREENE. Then we have the moral certainty that no soldier will leave our shores from now on without being provided with all that the Ordnance Department is expected to furnish, either here or in France, on his arrival?

Col. RICE. That is our expectation; yes, sir.

The CHAIRMAN. I would like to ask this question before taking up the next item: Can you give us any idea or can you estimate how long these machine guns will last when in action in time of war? Have you any idea of that?

Col. RICE. It depends altogether upon what happens to them. A great many of them will be lost and a great many are going to be damaged by poor usage, and some will probably have to be abandoned. If a gun is properly cared for, I should say that it ought to last through somewhere between 100,000 and 200,000 rounds fired.

The CHAIRMAN. On what basis did you get up this wastage estimate?

Col. RICE. We have arrived at that from records from the other side, and that is about what they figured they ought to have.

Mr. TILSON. The experience of our allies?

Col. RICE. Yes, sir; and we have made it liberal.

The CHAIRMAN. You have made it liberal?

Col. RICE. Yes, sir; we have made it liberal.

Mr. GORDON. Of course the wastage in the present war, since it first began, has been very much greater by reason of the relative equipment on each side than it will be from now on—is that true?

Col. RICE. I do not know why it should be true.

Mr. GORDON. Well, I suppose the allies are very well equipped now, but at the Battle of the Marne they were not very well equipped. They were outnumbered and ill equipped. Didn't they lose more guns in the first six months of the war than they have lost at any time since?

Col. RICE. I do not think they did; no, sir. I think, perhaps, that the losses in the recent Italian campaign have been heavier than in any other.

Mr. GORDON. That, of course, was due to captures.

Col. RICE. From all causes. There was a lot of equipment thrown away and a lot of it was captured.

Mr. GORDON. Any estimate of wastage, of course, is a mere guess?

Col. RICE. Yes, sir; absolutely.

Mr. GORDON. It depends upon the success of our armies in any event?

Col. RICE. To a degree; yes, sir. I conceive that the main thing is to be sure that your wastage item is high enough.

Mr. GREENE. May I ask whether the plans for salvage, which seem to be worked up into a quite efficient and effective organization, contemplate the saving of any number of such delicately formed weapons as machine guns?

Col. RICE. Yes, sir; they do.

Mr. GREENE. They can be restored to some usefulness in the making of new guns?

Col. RICE. Yes, sir.

Mr. GREENE. They are returned to the manufacturers?

Col. RICE. No, sir; we will have our own shops in France for that purpose.

Mr. GREENE. So they will not go into new guns, but in the reconstruction of partially disabled guns?

Col. RICE. Yes, sir.

Mr. TILSON. Are you requiring universal interchangeability of parts in those guns that are being manufactured in the different factories, or are you simply requiring a factory interchangeability? If you salvage those guns in the highest degree, it would be necessary to have universal interchangeability.

Col. RICE. Yes, sir; but we are not requiring universal interchangeability, because of the fact that it is not a practicable thing to do now.

Mr. TILSON. You do not standardize the gauges so as to have universal interchangeability of parts?

Col. RICE. No, sir; but we are requiring an interchangeability of parts which might, perhaps, be expressed as 60 or 70 per cent of the most important parts.

Mr. TILSON. If you had universal interchangeability of parts, you could take the parts made at any factory over here and have them in the salvage shops over there so that you could take out a disabled part and put in a new part made in any of these factories.

Col. RICE. We are doing that as between shops, and that applies to something like 60 per cent of the parts. Those are the parts that we expect to be most likely to be replaced. We are applying it to the others as much as we can, and we expect to raise that percentage very considerably in the future, but if we tried to make it 100 per cent interchangeable as between the different plants, we would not get the production.

Mr. TILSON. That is the ideal, but at present you can only go to a certain degree?

Col. RICE. Yes, sir. We are requiring that as between factories. We are not allowing it to be handled so that the only parts that will fit a gun are the parts made in the factory where the gun was made.

Mr. TILSON. In other words, you are requiring that the parts made in the other factory shall fit the guns made in this factory?

Col. RICE. Yes, sir; I am glad to say that we have the very best sort of spirit among the manufacturers. They have certain men detailed from among their engineers, men for each plant, who do nothing else but look after matters of coordination, and we have an organization in New Haven of two majors with a lot of junior officers who are doing nothing else but that.

Mr. TILSON. Trying to standardize the gauges?

Col. RICE. Yes, sir; and keeping the manufacturers together.

The CHAIRMAN. In the general equipment of our armies, are you providing as large a proportion of machine guns for our fighting units as are employed in other armies in Europe?

Col. RICE. Yes, sir.

The CHAIRMAN. Are we providing a larger percentage of guns than the French and English?

Col. RICE. Our plans are, perhaps, a little more liberal.

Mr. CALDWELL. Referring to the interchangeability of parts, do the articles manufactured by each factory carry on them any mark or indication that they were made in the particular factory in which they were made?

Col. RICE. No, sir.

Mr. CALDWELL. So that the parts that are not interchangeable would not be readily discoverable?

Col. RICE. They would have to be fitted anyway.

Mr. CALDWELL. How closely do they work them—down to the one-thousandth of an inch, do they not?

Col. RICE. Yes, sir; whenever it is necessary. We are trying all of these guns and I think it will be possible to make the average tolerance at least two one-thousandths of an inch.

Mr. CALDWELL. Taking the plus and minus into consideration, that would make a tolerance of four one-thousandths?

Col. RICE. Yes, sir.

Mr. CALDWELL. You have to make the plus and minus fit together?

Col. RICE. Yes, sir.

Mr. TILSON. As a matter of fact, are there not some parts of guns in which a much more liberal tolerance can be allowed in order to facilitate the manufacture?

Col. RICE. That is being very carefully worked out.

Mr. TILSON. And in other parts that would have to function very minutely, the tolerance would not be the same.

Col. RICE. That is true. One of the advantages about this Browning gun is that it will work satisfactorily with quite a good deal of looseness in nearly all of its parts.

Mr. TILSON. And the greater the tolerance the easier the manufacture?

Col. RICE. Yes, sir.

The CHAIRMAN. For armored motor cars you are asking \$75,550,000.

Col. RICE. Yes, sir; we are asking for \$75,550,000, which is wholly the case of asking for money to cover a contract authorization in the bill which was passed on October 6, in which there was an appropriation of \$21,750,000. I might say that that item came in as a supplemental estimate due to a cablegram from Gen. Pershing, in

which he said that the program for tanks had been worked out and adopted in Europe. Up to that time, as you will remember, there had been considerable question as to whether the troops should be supplied with tanks or not; that is, whether or not they were successful. It is agreed now that they are a success, and the numbers that are required have been specified from the other side. We therefore submitted a supplemental estimate at the last minute on the bill of October 6 and got an appropriation and this authorization of \$75,500,000. We have to have that money in cash to complete the work which is in process. When we get that money we will have provided for the tanks intended for 1,000,000 men instead of 1,500,000. That fact was not known when this estimate was submitted, and therefore it was not increased by the amount required to provide the tanks for a half million men to bring it up to the 1,500,000 which we are trying to cover in these bills. It will therefore be necessary for me to ask that there be added \$55,650,000 to this estimate, of which \$35,000,000 is a year's maintenance. The maintenance is 15 per cent a month on tanks, so that you see the maintenance item becomes greater than the original equipment, and by maintenance in this case we properly mean largely replacements.

The CHAIRMAN. How many of these cars do you figure it will take for an army of a million men?

Col. RICE. Six hundred of the heavy type and 1,500 of the light type as original equipment, with replacements at 15 per cent a month.

The CHAIRMAN. How many will it take for 2,000,000 men?

Col. RICE. Twice that.

Mr. TILSON. Does this item apply solely to tanks?

Col. RICE. That is all. The armored motor car as it originally appeared in the warfare over there is a dead issue.

The CHAIRMAN. The tank takes the place exclusively of the original armored motor car?

Col. RICE. Yes, sir; they have two types, one a light type of about 5 to 6 tons, which is really an armored motor car of the tank type, and then one running about 30,000 pounds in weight, which is the big fellow.

Mr. GORDON. Do you know what the speed of these light caterpillar cars is?

Col. RICE. About 8 miles.

Mr. GORDON. Does that not leave them open to artillery attack?

Col. RICE. Mr. Gordon, we thought, and I think it is the reason why everybody was doubtful about the success of the tanks, either light or heavy, that anybody that had a field gun could knock them into blazes, but as a matter of fact they do not do it, and I have tried my best to find out why they do not do it, and as far as I can see there are several elements. In the first place, they use a smoke screen. Then they bring them up into position at night. They protect them by barrage fire, and in addition to that before they send them forward they try to shake the enemy's nerve so that he can not shoot his guns like he would if it was a perfectly peaceful day. So that all told, after a great length of time, they have been tried out, and they have finally come to the conclusion that they are worth having.

The CHAIRMAN. They demonstrated that at the battle around Cambrai.

Col. RICE. Yes, sir. It may interest the committee to know that we sent a man over to France—Maj. Alden, who is the vice president of the Timken Axle Co., of Detroit, when in civil life—some time back. We brought him into the Ordnance Department and put him on the tank job, and he has a couple of experimental tanks out here now being finished in this country. When he learned what the thing was and how to go about it, being a very expert engineer, he was sent to Europe and he has arranged with the director of tanks of Great Britain, under the direction of Gen. Pershing, so that we are preparing to combine on the heavy tanks and build one type for both England and the United States. England is to furnish certain parts; the United States is to furnish certain parts; and they are to be assembled in a factory in France for both countries. Maj. Alden is now on his way home to round up the end here. In the meantime we are preparing here for the manufacture of our part of the program. It is really getting to be quite a business.

The CHAIRMAN. How do you estimate the number of these cars?

Col. RICE. We did not estimate that, Mr. Chairman. We asked Gen. Pershing how many he wanted for 1,000,000 men and then we have been trying to get them.

The CHAIRMAN. So it was just arbitrary?

Col. RICE. So far as our knowledge goes we do not know what he based it on. He is going to send us a report after a while by mail and we then will know, but at the present time we are not informed as to what his reasons are for saying that this number is what ought to be furnished, but we accept his statement.

Mr. KAHN. Did I understand you to say that this estimate is based on 1,000,000 men?

Col. RICE. The estimate, which was covered in the act of October 6, was based on 1,000,000 men. I am now asking for additional funds to cover another 500,000 and to cover the authorization given in that bill.

The CHAIRMAN. Colonel, what do these tanks cost?

Col. RICE. We figure the heavy one is going to cost all told about \$35,000 and the light one about \$12,000.

The CHAIRMAN. Are any made in this country, or do you propose to make any in this country complete and transport them to France?

Col. RICE. Yes; we are making all the light tanks in this country, and probably will make large quantities for the French in addition.

The CHAIRMAN. You mean you make them complete here and transport them in completed form?

Col. RICE. Yes, sir.

Mr. KAHN. Is there included any royalty in that cost of \$35,000?

Col. RICE. We are now negotiating on the subject. This light tank is of a type made by the Renault Co. of France. They sent sample tanks and drawings and an engineer over here, and we are building according to their drawings, modified in some respects to improve it. Their representative desires that they be paid for their design, which is a reasonable request. They have not patents, but they are furnishing us a going design which we can build by. They asked \$250,000, and I happened to be conducting the negotiations, and I told the representative that if an American firm were doing that, that somewhere between \$50,000 and \$100,000 would be what

would be paid, and I think eventually the amount paid will be somewhere between those two figures.

Mr. KAHN. I understand the patents in this country are in the hands of a man named Holt. Are you paying him a royalty?

Col. RICE. We are making him an allowance on some other work for his patents, so that we will have no trouble in using anything in the way of designs that Holt has.

Mr. KAHN. Will that take any appreciable amount of the \$12,000 or the \$15,000?

Col. RICE. That is not figured in here at all. That has been covered in contracts we hold for artillery tractors.

Mr. KAHN. Now, coming back to the efficacy of these cars, you said that they are protected by barrage fire, did I understand you to say?

Col. RICE. They have been in a good many cases: yes, sir.

Mr. KAHN. I was going to say that I saw in the report of the battle of Cambrai that there was no barrage fire on the side of the allied forces and that the tanks got into that battlefield quite unexpectedly and without that kind of protection.

Col. RICE. Yes, sir; they had no protection.

Mr. KAHN. After the English had gone forward I also noticed by the papers that they were again driven back. Do you know how the tanks were used after the advance had been made?

Col. RICE. No, sir; I have not that information.

Mr. KAHN. You do not know what part——

Col. RICE (interposing). I do not think they played any part afterwards. They are used normally only in advance work.

Mr. KAHN. You ask for this sum to be available until the fiscal year 1920. I think the Constitution does not permit Congress to appropriate for more than two years.

The CHAIRMAN. You are quite right about that. We will have to change that language.

Col. RICE. All right, sir. I would only like to have it available as long as possible.

The CHAIRMAN. We can only make it available for two years. That is as far as we could go.

Col. RICE. That will be plenty of time.

Mr. KAHN. Can you spend all of that money which you are asking for in that time?

Col. RICE. Yes, sir.

Mr. KAHN. If the Army is increased very considerably, say by another 500,000 men, in the next fiscal year, will you have to have a corresponding additional amount of tanks?

Col. RICE. Yes, sir; about \$55,000,000 for each 500,000 men.

Mr. KAHN. So that if the Army should be increased before the beginning of the next fiscal year by an additional 500,000 men you would begin this practically with a deficiency?

Col. RICE. We would need more money.

Mr. SHALLENBERGER Colonel, you spoke about the adjustment of the royalty to this French firm for furnishing drawings and an engineer, etc., for making these tanks, and you stated you were attempting to adjust the prices. That suggests to me that in the expenditure of this vast amount of money perhaps it would be well

to put in here a statement of how these matters are adjusted. Are you authorized to make that sort of a contract?

Col. RICE. Yes, sir.

Mr. SHALLENBERGER. Would there be any check upon the price you finally determined? Is that the general course of letting contracts in the Ordnance Bureau? I had an idea, possibly, now, in making these different contracts, for instance, for machine guns and armored cars, which have to be an agreed price because there can be no bidding, there was some sort of checking of your price by the War Industries Board?

Col. RICE. If the amount is sufficient to justify that, we practically invariably, before we finally put a bargain into the form of a contract, ask for their views and recommendations. This particular item probably would not go to them, because it is comparatively small. In my own division, as a rule, I do not send them to the War Industries Board if it amounts to \$100,000 or less. That is just an arbitrary rule, but we have adopted very carefully the plan of getting their views on all important contracts, with very rare exceptions.

Mr. SHALLENBERGER. In the past, before we went into this war and before we created this board, was it the practice of the officers of the Ordnance Department to make these contracts upon their own judgment?

Col. RICE. Yes, sir; in those times, normally, we had competition, and therefore we had a check upon the price. We now have no competition. In former years, if we were making a very considerable royalty contract or patent contract in which there was no competition, it was frequently taken up with the Secretary of War and his approval obtained before any action was taken by the Ordnance Department, although the law does not require that.

Mr. SHALLENBERGER. So that all of this sum of money under the law and under the Constitution would ordinarily be in the control of the Ordnance Department and its different bureaus?

Col. RICE. So far as the law is concerned, that would be possible. As I have explained, that is not the policy and not a thing we would want to do.

Mr. SHALLENBERGER. The reason I asked you that is because I recall that one member of the Appropriations Committee once stated to me that in the conduct of our affairs in a business way between the Government and individuals, the general policy of the Government had been to so conduct it that the money of the Government could not be wasted or lost or embezzled; or in other words, that the Government would not lose money, but that sufficient attention had not been paid to the efficient spending of the money, which, of course, is one of the questions being agitated right now in connection with the matter of the creation of a department of munitions, and so on, and I wanted to get a general idea of the business procedure heretofore in the letting of these vast contracts; whether there was any system of check other than what you have mentioned. The last word is with the Ordnance Department.

Col. RICE. It must be. I think if you will consult with any of the members of the War Industries Board, who are familiar with the subject, they will tell you that the Ordnance Department has

driven the hardest bargains of anybody in the Government service up to date.

Mr. SHALLENBERGER. I did not mean any reflection upon the Ordnance Department in asking the question, but I asked it because I think that question is going to come up before we get through with this matter.

Col. RICE. I understand that, and I mentioned it merely because we have devoted the greatest amount of care and attention to it. We have gotten men from civil life to take commissions who are expert in all of these things. We have great numbers of people who investigate plants and investigate the standing of the people we do business with, and who find out what proper prices are, and who do everything, pretty nearly, that it is possible to do to insure that the Government is getting as good a bargain as can be gotten under the conditions as they exist now; and if we are in doubt we then insist upon some sort of a limitation. I have negotiations on hand now with the Bethlehem Steel Co. and the Midvale Steel Co., who are not favorable to taking contracts on a cost plus a fixed profit, or any other kind of cost basis, except this one where we are trying now to insist that their fixed price contract shall be subject to examination of their accounts by an expert accountant of the Ordnance Department; and that the total profit shall be limited to 15 per cent.

Mr. SHALLENBERGER. Colonel, I think you will agree with me that the expenditure of these vast sums of money puts a great responsibility upon your department?

Col. RICE. Yes, sir.

Mr. SHALLENBERGER. There has been the charge made in some of the hearings over in the Senate, according to the papers, that certain members of the Civilian War Industries Board, possibly in one way or another, have been interested in some contracts that were let whereby, at least by insinuation, the interests of the Government have not been as well protected as they might have been. I would like to ask you in a general way if there is any evidence or any record in the War Department of any officer of the Ordnance Department ever having been charged with favoring contractors in letting contracts or if the Ordnance Department itself has ever been charged with anything of that sort?

Col. RICE. If so, I have not heard of it.

Mr. SHALLENBERGER. So far as you know, nothing of this kind in connection with this war, so far as the Ordnance Department is concerned, has been charged, and the officers of the Ordnance Department have not been charged with favoring anybody?

Col. RICE. No, sir. My division has let contracts approximating a billion dollars, up to the present time, and as yet I have not heard any rumor of any charge of that kind.

Mr. SHALLENBERGER. The reason I ask you that question is that there is at the present time a great deal of agitation of the charge that the Army organization, perhaps, has not got the business experience and the business executive ability to handle these things in a businesslike way, and therefore there has been a good deal of agitation in regard to the injection of civilians into the conduct and management of this matter, and that is going to be one of the matters that will be considered before we are through. I can see how there

would be an opportunity for the people in the Ordnance Bureau, perhaps, to favor contractors, if they wanted to do so.

Col. RICE. That is true. But I think the question will be only how civilians ought to be employed. Our Ordnance Department had in it, during peace times, less than 100 officers, and we now have somewhere near 3,600, and all the rest of them were civilians when the war started.

Mr. TILSON. Has not one theory of the criticism of the Ordnance Department been that you have been too slow in making your contracts? In other words, that you have taken too much pains to examine carefully and thoroughly every individual item before letting the contract, so that in the view of the public you have been tardy in getting your arms and ammunition?

Col. RICE. I think that is one of the principal charges, yes.

Mr. TILSON. And the cause of that, in your mind, is your care and investigation you make before letting the contract?

Col. RICE. No, sir.

Mr. SHALLENBERGER. Is it not possible that the first complaints were due to that cause, but that the other complaint which is possibly to follow late is the charge that they are not a businesslike organization?

Mr. TILSON. I was taking them as they have been arising, and the one now is that they have not been advanced fast enough, and I know of more than one case where organizations have been in existence for the manufacture of those guns, and have been willing to take over those contracts. They finally got them, but after considerable loss which might have been saved.

Col. RICE. I think nobody could have placed the contracts normally any more rapidly for various reasons. I would prefer not to say what I consider to be the reasons why some of these things have been slower than the public would like.

Mr. TILSON. How far are those tanks you have been speaking of calculated to go, with the power they will carry?

Col. RICE. I never made a computation of that. I know they are normally kept very near the front line, and when I say that I mean within a few miles. They do not allow them on the road, normally, and if they do take them on the roads they put them on trailers.

Mr. TILSON. They do not travel there by their own motive power?

Col. RICE. Normally not, because of the damage they would do to the road and their comparatively slow speed.

Mr. TILSON. But I suppose it is calculated that they will travel far enough of their own motive power to do the business they are supposed to do, and develop sufficient power to carry them?

Col. RICE. Yes.

Mr. TILSON. What about the arming of those cars; what number and caliber of armament do they carry?

Col. RICE. The smaller cars carry machine guns.

Mr. TILSON. Only?

Col. RICE. Only.

Mr. TILSON. How large a gun is carried on the largest tank?

Col. RICE. A short 3-inch.

Mr. TILSON. A 3-inch howitzer?

Col. RICE. Yes.

Mr. TILSON. How many of those?

Col. RICE. Normally not more than two.

Mr. TILSON. How many men ride on one of these cars, when it is in actual use?

Col. RICE. There are only three or four on the small ones. On the larger ones they will take 15 or 20 men.

Mr. TILSON. Do they steer them? Is there a steering arrangement, so that they can be easily manipulated by a man on board?

Col. RICE. Yes.

Mr. TILSON. Have we given any attention to the use of these things on the Italian front?

Col. RICE. Not to my knowledge.

Mr. TILSON. Do you know what the Italians themselves have done along this line?

Col. RICE. I do not. We have no information that they have any tanks at all.

Mr. TILSON. On the southern end of the western-front lines, where the French hold the lines, they have had these tanks in the same general number as the English have had, have they not?

Col. RICE. No, sir.

Mr. TILSON. The tanks really have been confined largely to the north end of the western line?

Col. RICE. Mostly. The French for a good while were doubtful about the utility of the tanks, and while they made experimental ones and put some in for a while, they did not get them in very great quantities. Their decision to use them in large quantities has only been recent, within the last couple of months.

Mr. TILSON. Does not the terrain affect the use of the tanks to a very large degree? I mean whether there are mountains or whether, as a general proposition, there are plains, or whether it is a rolling country.

Col. RICE. It would make some difference.

Mr. TILSON. In other words, if there was some precipitous ground to pass over, naturally you could not use them to the same extent that they could be used on level ground or rolling country?

Col. RICE. No, sir; they would not be so useful. In very mountainous country they could not be used at all.

Mr. GORDON. Have you ceased the construction of armored motor cars?

Col. RICE. We have made of the ordinary armored motor cars three experimental models, on which we have put crews, and started them for Fort Sill to find out what would happen to them. I have not heard what has happened to them. We are not intending to make any more unless there is some special demand for them.

Mr. GORDON. To what extent are armored motor cars used in Europe?

Col. RICE. Practically none on the western front. There are a few in Russia.

Mr. GREENE. Is it now your experience that the armored motor car, such as was originally contemplated, has turned out, so far as present purposes are concerned, to be more of a messenger car that carries personnel, and is not a combat car?

Col. RICE. We have no information that the messenger cars on the western front are armored.

Mr. GREENE. The French type of these cars was not very heavily armored, but were used more as a means of quick mobilization of machine guns, and for riot purposes, or to do some quick dispatch work of that kind. That does not appear to be of any use in the present situation.

Col. RICE. In the early days, when there was a good deal of movement of troops, the light armored motor car had a place. It has no place at all in the present situation on the western front, and consequently we are merely making the models and being ready to build them if they want them.

Mr. GREENE. Have we any tanks now constructed?

Col. RICE. No, sir. We have two or three experimental models, but they are not of the type we are going to use on the other side.

Mr. CALDWELL. Are we making tanks after the model of the one which was brought to New York for exhibition purposes a few weeks ago?

Col. RICE. Not exactly. It is something of that general type, but the tank commissioner in England and our man who is on that work have new designs, which both countries are going to use.

Mr. CALDWELL. When they brought that one to New York they attempted to take it across the bridge over the East River, but it could not climb the incline at the bridge, and it had to be pulled over the top of the hill and allowed to roll down.

Col. RICE. In this heavy tank that we have been designing, we are going to use the 400-horsepower liberty motor, strengthened up so that I guess we will have enough power.

Mr. CALDWELL. You said the tank is not used under its own power because it tears up the road. I thought that the tank laid its own track, and that therefore it did not hurt the road.

Col. RICE. The ones they have over there have cleats. We are making some of the caterpillar tracks. The caterpillar proposition, originally, was an American proposition entirely, and what they know over there about it they have gotten here, and we think we may be able to do better than they in that line.

Mr. CALDWELL. What is the weight of the armor they put on there? What is the thickness?

Col. RICE. I have not the drawings, but I think it 1 or 1½ inches.

Mr. CALDWELL. What kind of steel do they use?

Col. RICE. For the armor belt they use chrome nickel, largely.

Mr. CALDWELL. Have you conducted any experiments with nickel copper steel, which the Canadians are now testing in their department?

Col. RICE. I do not know of any. What were they testing it for?

Mr. CALDWELL. For armor. They find that by using the nickel-copper steel, a combination of the original ores, without first melting them and mixing them—they take the original ore and run it through the furnace, having first taken the samples of the various ores and put them in so that they know they are getting the proper constituents, and run that into a plate by itself. It will not rust, I understand, and it is stronger and has more resistance to a drill than the chrome nickel steel.

Col. RICE. I will find out whether the experimental people know anything about it.

Mr. CALDWELL. They have been testing it in the Canadian department, and I think they have there a bureau of standards which they use just as we use our Bureau of Standards here.

Mr. GREENE. Colonel, I have had an inquiry as to whether the Ordnance Department would be glad to consider a device which proposes to regulate the firing speed on machine guns. Is there any likelihood of the necessity for use or desirability to use that?

Col. RICE. It would not be a bad thing to try.

Mr. GREENE. Something of that kind has been sent down to Col. Anderson.

Col. RICE. There is some advantage in being able to regulate the fire, the rate of fire of a machine gun, but it has never been considered to be great enough to justify any very considerable complication. As usual in cases of that kind it would depend upon what the device was.

Mr. GREENE. If it was a simple thing the device might be desired?

Col. RICE. It might be.

Mr. DAVIDSON. I was very much interested in the colonel's statement in reference to the operation of the tank. What would you say about Von Hindenburg's trenches, which are 16 feet in width? What will a tank do with them?

Col. RICE. I think those trenches, excepting in an unusual case like that at Cambrai, will be sufficiently hammered down so that the tanks will go over them. If you have a vertical wall, which is some little higher than the distance from the ground to the point of the track, the tank might be stopped. It will go over anything below that.

Mr. KAHN. You do not intend to build any of these tanks in this country?

Col. RICE. We are going to build all of the light tanks in this country. They are now under contract and being built.

Mr. KAHN. At what factories?

Col. RICE. There is the C. L. Best Co., who are tractor people, and they are combining with the Platt Iron Works, of Indianapolis, and there are three or four motor companies that are building them. We have so many of the contracts out that I will have to look up the companies that have them. About four of them are on this job, and they are all working at Dayton, Ohio.

Mr. KAHN. I just wanted to know whether they are being built in this country or abroad.

Mr. MCKENZIE. Colonel, is it not a fact that these tanks are more efficient in tearing down barbed-wire entanglements and making openings for the infantry to get through than they are for any other purpose?

Col. RICE. In the normal case, I should say, no. In other words, the evidence is that the tanks can not go out in front without previous artillery preparation and all of that sort of thing, except in an unusual case where the line of the enemy is very thinly held and he is more or less surprised. They are very efficient in destroying barbed-wire entanglements, if they get there before the troops.

Mr. McKENZIE. Is it not a fact that heretofore the barbed-wire entanglements were supposed to be torn down by shell fire?

Col. RICE. Yes, sir.

Mr. McKENZIE. What I am thinking of now is the investment of this tremendous amount of money in these tanks. There ought to be some recompense from the financial as well as from the military standpoint. Would it not be cheaper to use these tanks to tear down those entanglements than to undertake to blast them down with high explosives, and in that case the artillery could be used as a harrage, and then they could go ahead and be driven through the wire entanglements?

Col. RICE. We figure it would not cost any more.

Mr. McKENZIE. As a matter of fact, you know, as a military man, that when these tanks, having a rate of speed of about 8 miles an hour, advance, if the army is compelled to retreat at all it is good-night for the tanks, and if they have not served the purpose of tearing down the barbed-wire entanglements, it seems to me they would be a useless incumbrance to an army.

Col. RICE. Those were some of the considerations that made everybody doubtful for awhile, but they have apparently worked that matter out, and they are satisfied the advantage is there.

Mr. McKENZIE. They were very satisfactory at Cambrai?

Col. RICE. The decision in reference to the use of tanks was made before the battle of Cambrai, so that the use of the tanks was based upon experience had prior to that battle, and in the service they have been found sufficiently successful, so that the English, French, and American Governments have agreed on a program for the use of the tanks.

Mr. HULL. How much of an embankment can one of these tanks go over? Of course, there is a limit.

Col. RICE. If you have a vertical wall which is some little higher than the distance from the ground to the point of the track, the tank might be stopped. Anything below that it will go over.

Mr. HULL. That is, 10 or 12 feet?

Col. RICE. I do not know what the exact figures are. I should say, not far from that.

Mr. CALDWELL. One of the greatest difficulties, as I understand, which you have now is the question of the transportation of men and materials for the war?

Col. RICE. Yes, sir.

Mr. CALDWELL. I understand that some of these tanks are to be assembled in France, and I suppose they will be sent over knocked down, and the parts will go over in boxes, so that they will occupy as little space as possible.

Col. RICE. Yes, sir.

Mr. CALDWELL. What are you going to do with the smaller tanks? Are you going to send those over and have them occupying the room in the ships?

Col. RICE. That will be a matter for the embarkation service to determine. Usually bulk is not particularly considered because ammunition is very heavy, and therefore there is usually much more space than weight-carrying capacity.

Mr. CALDWELL. I think if you will make further inquiry into the question of space you will find that space is being given very serious consideration, as well as weight, and if they have to assemble them it will take as many hands to assemble them over there as here, if our own people are going to assemble them, and it would seem to me that would tend to relieve us of a good deal of our trouble in the line of transportation. I only call your attention to that so that you can look into it.

Col. RICE. The original building of them and putting them together over there again would be very different. There would be no great difficulty in arranging it so that they could occupy less space.

(Thereupon the committee adjourned to meet Monday, January 7, 1918, at 10.30 o'clock a. m.)

ARMY APPROPRIATION BILL, 1919.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON MILITARY AFFAIRS,
Monday, January 7, 1918.

The committee this day met, Hon. S. Hubert Dent (chairman) presiding.

STATEMENTS OF MAJ. GEN. HENRY G. SHARPE, QUARTERMASTER GENERAL, AND MAJ. GEN. GEORGE W. GOETHALS, ACTING QUARTERMASTER GENERAL, ACCOMPANIED BY COL. S. M. DALLAM, MAJ. EZRA DAVIS, CAPT. CHARLES P. DALY, AND LIEUT. J. Q. A. BRETT, QUARTERMASTER CORPS.

The CHAIRMAN. Gen. Sharpe, I would like to ask one or two general questions before proceeding with the particular items of the bill. What is the total number of men you are estimating for?

Gen. SHARPE. Under instructions from the Chief of Staff, we are estimating for 1,612,245 men.

The CHAIRMAN. General, the appropriation for the pay of the Army at the last session of Congress amounted to \$844,639,118.30. Now you are asking for a total of \$1,003,933,676.04. According to the testimony given before the Committee on Appropriations, which granted both of these appropriations at the last session, I understood that both you and the Secretary of War based your estimates upon an Army of slightly over 2,000,000 men.

Lieut. BRETT. The number was 2,033,345.

The CHAIRMAN. How is it that the appropriation asked for is so much larger than was the appropriation for a less number of men?

Lieut. BRETT. Our estimate for the number of men was \$1,471,813,909.28, but Congress only gave us \$844,639,118.30.

The CHAIRMAN. Then your estimates were practically what they are now?

Lieut. BRETT. About \$300,000,000 more; nearly \$400,000,000 more.

The CHAIRMAN. So this amount is really accounted for by the fact that the Committee on Appropriations did not give you what you estimated for?

Lieut. BRETT. Yes, sir; that estimate and this estimate were arrived at by using the same per capita.

The CHAIRMAN. What is the per capita cost of the Army now?

Lieut. BRETT. For the entire Army?

The CHAIRMAN. Yes, sir.

Lieut. BRETT. The per capita is \$586.32 for pay; for all the appropriations of the Quartermaster Corps the per capita is about \$1,416; for all the appropriations of the Army the per capita for 1919 will be about \$4,380.21.

The CHAIRMAN. Does that include both officers and men?

Lieut. BRETT. Yes. If the total of the Army runs up to 2,000,000, we can cut that down somewhat, because the overhead charges do not increase in the same proportion as the increase in men. Up to 1,800,000 men that is a good, fairly accurate per capita to use; and when you get above that number you can decrease that a little, because various things in the matter of overhead charges disappear. That includes 1,612,245 enlisted men and 100,000 officers.

The CHAIRMAN. The first item on page 13, under "Pay of the Army, Quartermaster Corps," is "Officers of the line: For pay of 62,000 officers of the line, \$142,943,400." That is for 62,000 officers?

Lieut. BRETT. Yes, sir; and it is arrived at by using a per capita of \$2,313 for an officer.

The CHAIRMAN. Is that the correct number of officers, 62,000?

Lieut. BRETT. That is just an arbitrary distribution between the line and the various staff corps. We have no means of making an accurate distribution.

The CHAIRMAN. You mean to say you do not know how many line officers there are?

Lieut. BRETT. Yes, sir; there were 77,795 on November 30. For the enlisted men the per capita is \$393.69, and that gives us almost absolutely accurate information.

Mr. KAHN. These 62,000 officers that you are estimating for are predicated on an Army of what strength?

Lieut. BRETT. On an Army of 1,612,245 men.

Mr. KAHN. If the President of the United States should call the next increment of the National Army before the beginning of the next fiscal year you would start this item with a deficiency, would you not?

Lieut. BRETT. Yes, sir.

The CHAIRMAN. Can you put into the hearings a statement of how many additional officers and the grades of the officers who would be required for each additional 500,000 men for an Army of 3,000,000 men?

(The data requested are as follows:)

For each increment of 500,000 men added to the Army there should be added 27,778 officers; hence—

27,778 officers, at \$2,313 each, for one year-----	\$64, 250, 514
500,000 men, at \$393.69 each, for one year-----	196, 845, 000

Base pay of officers and men, one year-----	261, 095, 514
For all other expenses allow \$75 each, which for 27,778 officers and 500,000 men gives-----	39, 583, 350

Total cost for pay of officers and men, one increment-----	300, 678, 864
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Probably we might be able to pay out on \$290,000,000.

The \$75 per capita used above covers service pay and foreign-service pay for both officers and men, increased number of Army field clerks and nurses, court-martial expenses, commutation of quarters and of heat and light for officers and men, and additional pay for mounts for officers.

Lieut. BRETT. We can not very well give you the grades. This estimate here gives 100,000 officers for 1,612,245, and that gives practically 1 officer for 16 men. If you use 1 officer for 18 men you will have a fair estimate. That will give probably a well-balanced force, as far as officers and men are concerned.

Mr. KAHN. Does that proportion obtain in the European armies—1 officer for every 16 or 18 men?

Lieut. BRETT. As I understand it, our divisions have been organized after the organization of the European armies—that is, the armies on the firing lines—and that gives us a division composed of just under 27,000 officers and men.

Mr. KAHN. How many officers are there to a division under that new arrangement of the divisions that contain a little less than 27,000 men each?

Lieut. BRETT. Eight hundred and eighty-nine.

Mr. KAHN. Can you put into the hearings the number of officers required for a single division and the salaries paid to them—that is, the officers of each arm?

Lieut. BRETT. The following shows the commissioned officers in an Infantry division, with their pay:

	Major general.	Briga- dier gen- erals.	Col- onels.	Lieut- enant col- onels.	Majors.	Cap- tains.	First lieu- tenants.	Second lieu- tenants.	Total.
1. Division headquarters...	1	.....	1	4	7	7	4	5	29
2. Infantry brigades (4 regiments of infantry, 2 machine gun bat- talions).....	.....	2	4	4	24	88	204	138	464
3. One Field Artillery bri- gade (2 regiments 3- inch guns, 1 regiment 4.7 or 6 inch howitzer, 1 trench mortar bat- tery).....	.....	1	3	3	11	43	81	62	204
4. One machine gun bat- talion (4 companies)...	.....	.....	.....	.....	1	4	10	12	27
5. One regiment engineers.....	.....	.....	1	1	3	17	15	12	49
6. One field signal bat- talion.....	.....	.....	.....	.....	1	4	9	.....	14
TRAINS.									
7. Train, headquarters, and military police.....	.....	.....	1	.....	1	6	5	2	15
8. Ammunition.....	.....	.....	.....	1	2	8	9	8	28
9. Supply.....	.....	.....	.....	.....	1	.....	4	3	8
10. Engineers.....	.....	.....	.....	.....	.....	.....	1	1	2
11. Sanitary.....	.....	.....	.....	.....	6	22	21	.....	49
Total for one division.	1	3	10	13	57	199	363	243	889
Yearly pay of grade.....	\$8,000	\$6,000	\$4,000	\$3,500	\$3,000	\$2,400	\$2,000	\$1,700	.....
Yearly pay of 889 officers of a division.....	8,000	18,000	40,000	45,500	171,000	477,600	726,000	413,100	\$1,899,200

Pay given is base pay only.

Lieut. BRETT. Yes, sir; we have that. If the entire Army is composed of divisions, we can give you the various corps, but there are so many technical and special troops, provided for under the act of May 18, that I am not sure that that same proportion obtains through all the technical troops.

Mr. FIELDS. This is in the line, is it, where you figure an officer for 16 or 18 men?

Lieut. BRETT. That is for the entire Army.

Mr. FIELDS. If you take into consideration the other branches of the service, such as the Quartermaster Corps and the Ordnance Corps, it seems to me you are figuring about 11 or 12 men to an officer.

Lieut. BRETT. It runs all the way from five and a fraction up. In the Ordnance Corps the percentage is one officer to five and a fraction men, so that it is not safe to take these figures here, which is a purely arbitrary distribution.

Mr. FIELDS. Is that due to the fact that the Ordnance Department contains a good many civilians?

Gen. SHARPE. The men are employed in the different manufacturing plants, superintending the construction.

Lieut. BRETT. In the Ordnance Bureau the proportion is 1 officer to 5.7 men; in the Quartermaster Corps it is 1 officer to 16.37 men; in the Medical Department it is 1 officer to 10 men; in the Signal Corps it is 1 officer to 9.37 men. That is the way they run.

Mr. CRAGO. Take an entire division and it makes 1 officer to about every 33 men?

Lieut. BRETT. Yes, sir.

Mr. FIELDS. Are any branches of the service suffering from a shortage of officers at this time?

Lieut. BRETT. I could not say about that, although I think the Medical Department is.

Gen. SHARPE. I think the Ordnance Department has appointed a great number of officers. There will be some in the Quartermaster Corps, too. The Engineers have 6,015 officers, and they want 6,550 in 1919. There are in the Ordnance Department 2,306, and they want 7,988. The Engineer Corps are more nearly up to their requirements than any other corps I have any information about. The Medical Department wants 38,089 officers, and they have 24,060.

Mr. FIELD. In what corps is the greatest shortage of officers; or can you give us that information?

Gen. SHARPE. The Medical Department do not give the officers they have. They put it in this way: Medical Corps, 716; Medical Reserve Corps, 14,901; Medical Corps of the National Army, 1,460; Dental Corps, 178; Dental Reserve Corps, 4,398; Dental Corps, National Guard, 229; Veterinary Corps, 118; Veterinary Reserve Corps, 228; Veterinary Corps, National Army, 260; Veterinary Corps, National Guard, 78; Sanitary Corps, 477; Ambulance Service, 97.

The shortages are generally in the lower grades. The higher grades are filled up, because they are there by promotion.

Mr. CALDWELL. In Europe, as I understand it, in a great many of the sections of the armies they have what they call junior and senior captains; is that true?

Lieut. BRETT. I could not state about that.

Mr. CALDWELL. Have we adopted that policy in any of our corps?

Lieut. BRETT. No, sir; we have a captain and a first lieutenant.

Mr. CALDWELL. We have also a second lieutenant in a great many organizations?

Lieut. BRETT. There are six officers now in a company of Infantry, composed of 250 men, whereas normally we had with a company of 150 men three officers.

Mr. CALDWELL. We have not 3 captains?

Lieut. BRETT. We have just 1 captain, 3 first lieutenants, and 2 second lieutenants.

Mr. CALDWELL. One captain, 3 first and 2 second lieutenants?

Lieut. BRETT. Yes.

Mr. CALDWELL. Was that policy adopted following the same system used on the other side, or was it thought out on this side?

Lieut. BRETT. That was made pursuant to the authority granted in the selective-draft act of May 18.

Mr. CALDWELL. What I mean is this: I have heard some criticism, some friendly criticism, as regards the fact that over there the companies have junior and senior captains—I do not know how accurate the basis of the criticism is—but I have heard that over there the companies have a junior and a senior captain, and when the senior captain is not there they have a junior captain on the job, so that you have both a junior and a senior captain and the lieutenants, while we have a captain and lieutenants, and when the captain is not present the first lieutenant is doing the captain's work. What I was inquiring about was whether our policy was adopted on a special study made here or whether we were following some policy established on the other side. My informant may have been mistaken.

Gen. SHARPE. That system was adopted after a study made here, and they established the system of having 1 captain, 3 first and 2 second lieutenants. I think it was a compromise on the numbers they have over there.

Mr. CALDWELL. What do you think about the plan? Do you think we ought to continue in this way, or whether we should have 2 captains?

Lieut. BRETT. We would have to have legislation in order to have 2 captains, unless they were of the same rate of pay.

Mr. CALDWELL. Congress is in session, and that is what we are trying to find out—whether we should give you more legislation.

Lieut. BRETT. I think if the General Staff made a study of that proposition they would be in a better position to express an opinion as to the desirability of increasing the number of officers than we are. We are just simply following the figures as they are given to us.

Mr. CALDWELL. Mr. Kahn started to ask you a question, and I think the answer got off the direct question. Will these same percentages obtain for each additional increment authorized under the draft? In other words, you have figured now on 1,612,245 men. If they take additional increments of 500,000 or 600,000 men, as they have been doing in the past, will we add to the sum you ask for the same percentage of increase, according to the percentage of increase in the number of men.

Lieut. BRETT. I think the usual average proportion is 1 officer to 18 men.

Mr. CALDWELL. Will you put into the record a memorandum for each additional increment, so that we can have an actual figure for each additional increment up to 3,000,000 men?

Lieut. BRETT. For each increment of 500,000 men?

Mr. CALDWELL. Yes.

Lieut. BRETT. For each increment of 500,000 add 27,778 officers.

Mr. KAHN. You stated that with a company of 150 men you had three officers?

Lieut. BRETT. Yes.

Mr. KAHN. That with a company of 250 men you have 6 officers. Now, it has always been claimed that when you increase the number of men the ratio of officers is less.

Gen. SHARPE. I think that was all arranged by the General Staff, due to the difference in the methods of warfare now being conducted on the other side. I think that has had its influence on the organization of the companies.

Mr. KAHN. Probably the General Staff officers can tell us about that.

Gen. SHARPE. Yes, sir.

Mr. CRAGO. They have never had satisfactory experience with a company of 150 men managed by 3 officers?

Lieut. BRETT. We were limited by the act of June 3, 1916, until you gave us this act of May 18, and a study of the conditions abroad indicated that if we carried the proportion of officers to a company of 150 men up to a company of 250 men it would not be sufficient.

Mr. ANTHONY. I want to ask Gen. Sharpe some questions about the commissioned personnel of the Quartermaster Corps. Gen. Sharpe, is your corps full now of commissioned officers?

Gen. SHARPE. We are not full now, taking into consideration the number which were recently authorized. Col. Dallam can tell you about that.

Col. DALLAM. There are 330 vacancies at the present time.

Mr. ANTHONY. In the line corps?

Col. DALLAM. No vacancies in the line corps. We have 1,500 excess.

Mr. ANTHONY. From what sources do you obtain commissioned officers in the Quartermaster Corps now?

Gen. SHARPE. We are obtaining them from the camps which have graduated them.

Mr. ANTHONY. You are taking in young men?

Gen. SHARPE. Young men; yes, sir. The present sources now are the Regular Army, the reserve officers we have appointed, and then we have some 3,000 officers which we secured from the first training camp.

Mr. ANTHONY. From the training camp?

Gen. SHARPE. Yes.

Mr. ANTHONY. What is your age limit for the appointment of an officer in the Quartermaster Reserve Corps?

Gen. SHARPE. I think it is from 25 to 59.

Mr. ANTHONY. Did you not start with an age limit of 45?

Col. DALLAM. No, sir; that does not exist in the Staff Corps.

Mr. ANTHONY. I understand you are now taking men from the reserve officers' training camps. I have been told that you have been taking men that were needed more in the line of the Army.

Gen. SHARPE. Those men were assigned to us from the first training camp—3,000 men.

Mr. ANTHONY. What is the military logic in taking a young man from a training camp, men who have been trained and who are competent and who are needed in the line of the Army, and not accepting the service of business men, who are trained in business usages, and who are offering to go into the Quartermaster Corps, but who are being rejected because they are over 45 years of age?

Gen. SHARPE. We have not made any appointments in the corps since April 12, except of special and technical men. We got 3,045 men from the first training camps.

Mr. ANTHONY. What do you think of that policy? Would it be a better or a poorer policy to take trained business men of mature age, which could not be utilized on the fighting front—would it be better policy to take men of that class for the work of the Quartermaster Corps and let the younger fellows go to the fighting front?

Gen. SHARPE. The men we got from the training camps were the men who were in excess of the number desired for assignment to the line. They did not intend to assign more than a certain number of men to the line at that time, at the time the first training camp was established. They gave us 3,045 men from that camp, and we intend to send them through our school of training. My purpose for the future was to get the men from the ranks.

Mr. ANTHONY. Here is the point: This country will probably need every man it can get who can perform some military duty. What is the argument by which you are utilizing these young men from the training camps who are competent to serve on the fighting line and turn down applications, as I say, of trained business men who are anxious to get into the Quartermaster's Department, where they are competent to serve the Government?

Gen. SHARPE. We had no vacancies after the 3,045 men were assigned to us.

Mr. ANTHONY. I know of cases in the last three or four months where men of the class I am telling you about have been utterly unable to get any encouragement from the War Department, and still during that time you have been taking levies of young men from the training camps.

Gen. SHARPE. No, sir; we have only taken one levy. From the first training camp we got 3,045 men, and we received none from the other training camps.

Mr. ANTHONY. What do you think of utilizing the services of those men that I have referred to?

Gen. SHARPE. If those men demonstrate their ability, I think it would be a very good thing.

Mr. ANTHONY. Is there any way in which they can get in touch with your department?

Gen. SHARPE. Not now, because the department was practically closed with the 3,045 men we have gotten in and with the men we have taken in since the act of May 12.

Mr. ANTHONY. Would it not be a good plan for you to have these young men in the training camps whom you have already taken transferred to the line of the Army and their places taken by men of more mature years?

Gen. SHARPE. They have had considerable training in our department now.

Mr. ANTHONY. That would not hurt them for fighting purposes?

Gen. SHARPE. No. They are going through our school and getting trained in our work.

Mr. ANTHONY. Then it apparently is not the policy of your department to afford recognition to these practical business men who want to get into the service?

Gen. SHARPE. I would not say that, but it had been our policy up to April 12 to make use of those men as reserve officers, and we made use of as many of them as had the ability.

Mr. ANTHONY. The age limit is 56 years?

Gen. SHARPE. Fifty-nine.

Mr. ANTHONY. Did you decide you did not want their services?

Gen. SHARPE. Yes, sir; we have made no appointments since April 12, except those of technical and special men.

Mr. ANTHONY. I think it is a grave error of your department not to utilize the services of men of this class.

Mr. McKENZIE. Has there been any lack of applications from men in civil life to get into your department?

Gen. SHARPE. No, sir.

Mr. McKENZIE. There has been an abundance of applications?

Gen. SHARPE. Yes, sir.

Mr. McKENZIE. Has your department looked with any degree of favor upon applications of young men who were, perhaps of draft age or military age, trying to get a commission in your department, young men from civil life?

Gen. SHARPE. We can not appoint men of draft age, and that has been true since August 11.

Mr. McKENZIE. Prior to that time?

Gen. SHARPE. Prior to that time we closed the department on April 12, and then we were counting on those men we got from the training camps—3,045.

Mr. McKENZIE. Has there been any apparent desire exhibited by the type of young men Mr. Anthony has spoken of, assigned to you from the training camps to be transferred from your department to the line?

Gen. SHARPE. Col. Dallam can answer that question. I do not recall any, except one or two cases.

Col. DALLAM. We have a number of applications of individuals, although I would say it is a small number, and of officers who have applied for transfers to different arms of the service or to the other staff corps, and in many cases, where they could show a good reason, the application was approved.

After they got settled at the training camps the policy was to disapprove those applications, because they have been getting training in the Quartermaster Corps, and, having been once trained in the work of the Quartermaster Corps it would be, in our opinion, a poor policy to break up the work of a trained man and start him all over again.

Mr. McKENZIE. General, is it not a fact that your department has been unusually embarrassed by the outrageous pressure brought to bear from the outside by men in civil life endeavoring to get into your department in order to escape service in the line?

Gen. SHARPE. We have had a great many applications coming in from men of the draft age.

Mr. McKENZIE. Is not the Quartermaster's Department looked upon as rather a haven of refuge in time of storm? I do not say that in an offensive way.

Gen. GOETHALS. That has been my experience since I have been here in the last 10 days.

Mr. McKENZIE. I have no reference to a military man who is an officer, but I am speaking now and have reference to the men outside, in civil life, who might be subject to active military service. Is it

not true that the pressure has been something enormous by men in civil life endeavoring to get into the Quartermaster Corps?

Gen. GOETHALS. Yes; it has been enormous.

The CHAIRMAN. In line with the questions asked by Mr. Anthony and Mr. McKenzie, you say you have not made any appointments to the Quartermaster Corps since April 12, except those of special and technical men. What do you mean by special and technical men?

Gen. SHARPE. We have appointed them for duty in the motor-repair shops—motor men. You can not get those men beyond the draft age, for the reason that we want men with college training in the motor industry, and it is a new business, and the courses in that work have only been started within the last few years; so that the men you get are practically all within the draft age.

The CHAIRMAN. That is one illustration. Can you give us some other illustrations?

Gen. SHARPE. The stevedore regiments were selected because of the supposed familiarity of the men with the stevedore business, and some of the men who were appointed were in the draft age.

The CHAIRMAN. You say there have been no appointments of men within the draft age in your department since last August?

Gen. SHARPE. None within the draft age.

The CHAIRMAN. Since last August?

Gen. SHARPE. Yes; except in these exceptional cases; in the cases of technical and special men.

The CHAIRMAN. As a matter of fact, the general order prohibiting appointments of men within the draft age did not go into effect until December?

Gen. SHARPE. No, sir; on August 11 we got our instructions from the Secretary.

The CHAIRMAN. For all Staff Corps?

Gen. SHARPE. I do not know that it is limited to the Staff Corps. I think it applied to all.

Mr. NICHOLLS. You stated you got something over 3,000 men from the first training camp assigned to your department.

Gen. SHARPE. Yes.

Mr. NICHOLLS. Are you allowed to give those men preference under that order? Suppose you wanted to appoint somebody else; have you got the power to do it, or do you have to take them from those 3,000 men?

Gen. SHARPE. We have to take them out of the 3,000 men. When we requested the Adjutant General's Department for some men for the special and technical units, they asked us if we had looked over the 3,000 men.

Mr. NICHOLLS. They had the preference, however?

Gen. SHARPE. If we can find anybody there who is suitable.

The question was asked whether or not we had few officers in our corps. I think the total number authorized for the Quartermaster Corps is 6,701, and we are about 300 short of that number. The total number of enlisted men authorized for the Quartermaster Corps is 164,147. I do not think either of those numbers is going to be anything like adequate, for this reason:

The Quartermaster's Department has much greater activities than the quartermaster department of the English Army. We do the

transporting of the troops, and we construct the quarters for them, and we have many activities which the quartermaster's department of the English Army does not have.

There is one branch of the quartermaster's department over there known as the Army Service Corps. At the outbreak of the war they had 435 officers in that department and between 10,000 and 12,000 enlisted men. To-day they have 10,000 officers and 200,000 enlisted men.

While their army is larger than ours, our activities are so much greater and along so much more varied lines that it is fair to assume that the total number of officers in our corps and the total number of enlisted men would at least equal what they had in one branch of that department over there. I do not think we can say we have anything like the number of officers and men that we have got to have in the Quartermaster's Department.

Mr. GORDON. I understood one of your officers to suggest that the safety-first men are importuning you with a good deal of persistence to get into the Quartermaster Corps, these fellows of draft age.

Gen. SHARPE. There was a good deal of that, particularly just before the closing of the volunteer enlistment period about December 15.

Mr. GORDON. Just what was the reason for transferring these 3,000 men who had been in the training camps to the Quartermaster Corps?

Gen. SHARPE. They were at the camp, and we thought it would be a good opportunity to have men with a certain amount of training in military matters, and we asked for the assignment of 200 men from each one of the 16 training camps.

Mr. GORDON. You give these men a special course of training for the work in your corps?

Gen. SHARPE. After they get in.

Mr. GORDON. How does the training they receive in the training camps fit those men for the Quartermaster Corps.

Gen. SHARPE. It does not do that, especially.

Mr. GORDON. Then why would they assign 3,000 officers who had graduated from the training camp to the Quartermaster Corps?

Gen. SHARPE. They were over and above the total number of men they wanted for the line.

Mr. GORDON. They were surplus?

Gen. SHARPE. They were surplus; yes, sir.

Mr. GORDON. Why then did they start right in with another training camp?

Gen. SHARPE. I do not think they anticipated having more than one camp at that time. They are going on now; they have had two, and now they are going to have another one.

Mr. GORDON. When they discovered they were going to be short of officers, why did they not transfer those 3,000 men back to the line, as Mr. Anthony suggested?

Gen. SHARPE. I do not know.

Gen. GOETHALS. They did not want them, in the first place, in the line, and so they turned them over to the Quartermaster Corps.

Mr. GORDON. They were not skilled for the line?

Gen. GOETHALS. They did not think they were as skilled as they ought to be. They did not think they would make officers in whom the men would have confidence.

Mr. OLNEY. Do you think they would make good privates in the line?

Gen. GOETHALS. I do not know.

Mr. ANTHONY. Have you sufficient authority, as Quartermaster General, if you have an application from a man of unquestioned ability to serve in your department, to avail yourself of the services of that man?

Gen. SHARPE. We had not until recently.

Mr. ANTHONY. Not until recently?

Gen. SHARPE. Except on special and technical lines.

Gen. GOETHALS. There are a great many business men willing to come into the Quartermaster Corps, men claiming they are getting from \$15,000 to \$30,000 a year, and they will come in if they are made colonels. Everybody is coming in after rank.

Mr. ANTHONY. The question I had in mind was suggested by the case of a big lumber man from the West, a very wealthy man, who said he had offered his services in any capacity. He did not care about getting a commission, but he offered his services in any capacity, and he said he was ashamed not to be giving his services to the Government, and he said he had been here a month and that they told him they could not take him. He was a man of the very best business ability, and probably far superior to the men you got from the training camps.

Gen. SHARPE. Possibly that is so, but the point is this: We announced that the department was closed after April 12, except to special and technical men, and it has been our endeavor to live up to our statement. If we made appointments such as you refer to in one case we would have to make them in all cases.

Mr. QUIN. When did they make the change in the age to 59 years?

Gen. SHARPE. We appointed officers of the Reserve Corps up to 59 years of age whenever they took their examination, under the act of June 3, 1916, from that time on; that limit was fixed at 59 years at that time.

Mr. QUIN. Now nobody can get in?

Gen. SHARPE. No, sir; we have not taken anybody in recently, except the technical and special men.

Mr. QUIN. Forty-six years is the maximum now?

Gen. SHARPE. I do not know whether any age has been fixed recently.

Mr. McKENZIE. General, it has been stated by Col. Dallam that you are short about 300 officers in your department at the present time.

Gen. SHARPE. Yes, sir.

Mr. McKENZIE. And it has also been stated that there are probably 1,500 men on the waiting list.

Col. DALLAM. Twelve hundred and twenty.

Mr. McKENZIE. On the waiting list? Now, of course, those men on the waiting list would come in and be commissioned.

Gen. SHARPE. They have been.

Mr. McKENZIE. They have been?

Gen. SHARPE. Commissioned as second lieutenants, now. We have sent others of them to the training camps for instructions. These 1,200 men are to go after the first lot of men have finished their course of instruction.

Col. DALLAM. The 1,500 men are at the training camps now, and they include everybody not on duty now. They are being absorbed from time to time, and it is very difficult to obtain them at this time from the training camps.

Mr. McKENZIE. The point I am trying to bring out is why you can not supply the deficiency of 300 men from the 1,200 men by the promotion of the men now in the service.

Gen. SHARPE. That includes the 1,200 men. The deficiency is in excess of 1,200 men.

We had in the corps some 6,400 men, and in the last authorization from the Chief of Staff we were allowed to have 6,701 men in the Quartermaster Corps. We have only gotten that within the last few days, and there has not been time to make those appointments.

Mr. McKENZIE. If that is true, would not this be the proper time to take down this embargo against the commissioning of such men as Mr. Anthony speaks of and allow enough men to come in to fill up your required number?

Gen. SHARPE. That is for Gen. Goethals to decide.

Mr. McKENZIE. I am not asking whether it is for you to decide, but would it not be a good thing to do?

Gen. GOETHALS. I would rather close down on appointments until we can get our organization lined up. I have started in on a reorganization of the department. I do not know where we could use a lumber man at the present time.

I have divorced subsistence from clothing and equipage, and I am reorganizing the clothing department, and I am trying to get the biggest men in the country in the various specialties and put them at the head of those specialties in the volunteer service, because I can not give them the rank they should have occupying those positions.

As I select the heads, I am going to let them select their subordinates, so that they can get results. I am going to commission the men we get in this way with such rank as I can get for them, but whether I can use a lumberman in that organization is doubtful.

Mr. McKENZIE. That is a satisfactory explanation.

Mr. CRAGO. Is it not a better policy to provide that the men commissioned shall have had some military training?

Gen. GOETHALS. That is true, but the Quartermaster Corps is a business corps. I told the Secretary of War the other day that if I could take off my uniform and get across the table with another civilian, so that we could talk very frankly between ourselves, I could get better results.

Mr. CALDWELL. Is it not a fact that in the foreign armies the Quartermaster Corps is made up largely of civilians?

Mr. CRAGO. I think that is and should be true, but I think whenever they are given rank they ought to have some military training and some knowledge of what the rank means. I agree thoroughly with the general that we had better have a good business organization, but if they are going to give the men rank at all there ought to be some knowledge of military affairs going with it.

Mr. GARRETT. I wanted to ask Gen. Sharpe if Gen. Goethals is correct in his conclusion that the 3,000 men rejected at the training camps were all rejected because they could not maintain the respect of the men in the line, and if that is true, I wondered why they should

be transferred to any department, and why they should not be stricken off the list entirely and sent back home, and let it be known that they were not suited for commissions?

Gen. SHARPE. They certified them to us as being suitable for the Quartermaster's Department. In the last training camps, where we were getting no men from them at all, a great deal of trouble has been brought to you gentlemen here, I know, by some of the officers at the training camps writing a letter to some of the students at the camps and stating that they regretted sincerely that they were not able to certify them for commissions in the line, but they thought they would make good officers in the Quartermaster's Department. That simply put trouble up to you gentlemen here.

Mr. GARRETT. Here is a young man in a hardware store, we will say, who is 25 years old, and who knows the hardware business from top to bottom, and who is a hustler in the business. I would like to know what is the matter with that fellow when he comes to the training camp, if he can not make a good man in any line? If he is a good man in that particular line, why would he not make a good man in the line of the Army? If he is a hustler among his associates and recognized as such, a man who can order men around and get things done when he is in a hardware store, why can he not get things done anywhere?

Mr. GORDON. He might be gun-shy.

Gen. SHARPE. Those men were passed upon by the officers at the camps.

Mr. GARRETT. What has developed at any of the training camps to show whether a man is gun-shy or not gun-shy?

Gen. SHARPE. They have had a very thorough system by which they selected them.

Gen. GOETHALS. If I were a line officer in charge of the training camps, I would be especially interested in the officers that would be assigned to my branch of the service. Officers are selected from the training camps by boards of line officers, and they are going to select the best for themselves. They are going to turn over to somebody else what they do not think is the cream of the list, and I do not suppose that if they knew a man was a first-class business man, if the youngster impressed them that he would make an admirable officer they would sacrifice him to the Quartermaster Department, because their ideal is the line.

Mr. GARRETT. Then I will ask you if in your opinion it would not be practically impossible to find good men for the Quartermaster Corps?

Gen. GOETHALS. I think so.

Mr. FIELDS. I believe you said that in the case of the technical men and the special men you require them to have a college education.

Gen. SHARPE. I said in the case of the men in the motor service we try to get men who are really trained by study in that work, and that necessarily that would throw us men within the draft age, because that is a new business, and instruction in that work has been only recently introduced.

Mr. FIELDS. Suppose a man applies who has not a college education but who by nature and by practical experience is a most valuable man in that line of service. Do you consider his application?

Gen. SHARPE. No, sir.

Gen. GOETHALS. No; they are being selected and I am appointing those men now. They are being selected for their actual ability to do the work required of them and their capacity to handle men.

Mr. OLNEY. You have what is called a shoe-repair unit?

Gen. SHARPE. Yes.

Mr. OLNEY. What is the size of this unit? I have heard that there are about 6,000 men in the cantonments here and going abroad. There have been a number of men trying to get in, waiting to join that unit.

Gen. SHARPE. Maj. Davis can give you the information about that.

Maj. DAVIS. The shoe-repair unit at the cantonments is composed of about 21 men. It is expected that the allotment will be increased as soon as they get their machinery under way.

Mr. OLNEY. What is the pay of the men in the shoe-repair unit?

Maj. DAVIS. It is according to the grade they have. Those men are made up of certain grades of noncommissioned officers—sergeants (first class), sergeants, and corporals.

Mr. OLNEY. Is the pay large enough to induce men beyond the draft age who are expert shoe workers to enlist?

Maj. DAVIS. Not except for patriotic motives.

Mr. OLNEY. Is the pay \$60 a month or more?

Maj. DAVIS. The pay of the sergeants, first class, would probably induce men beyond the draft age to enlist. We have in some of the cantonments men who feel that they want to render service to the country, and they are employed in the work with the pay of a sergeant, first class.

Mr. OLNEY. Is it necessary to take these young men, between the ages of 21 and 31 years, to go beyond as a part of the shoe-repair unit?

Maj. DAVIS. Not necessarily. If a man should volunteer for the shoe-repair unit, beyond the draft age, with a shoe-repair unit which was going over, he would go over with that unit.

Mr. OLNEY. But you can not get those men, the pay being so small?

Maj. DAVIS. Not to any great extent.

Mr. KAHN. General, this first officers' training camp, assigned the students of those camps to the various line organizations; that is, they graduated some for the Field Artillery, some for the Infantry, some for the Coast Artillery, some for the Cavalry, and then I understood that those whom the officers felt did not have the qualifications to lead men were put into the staff departments; is that your understanding of it?

Gen. SHARPE. We asked for about 200 men from each one of the camps, and I suppose that was the way in which it resulted. They made their own selections first and gave us the best of the men still left.

Mr. KAHN. There were a great many men in those first camps who were not commissioned at all. They were just weeded out, and became subject to the draft?

Gen. GOETHALS. That is true.

Mr. KAHN. Have all the men under the first draft gone to the camps?

Gen. SHARPE. No, sir; not all of them.

Mr. KAHN. What percentage have not gone to the camps?

Gen. SHARPE. I think there are about 200,000 men not yet gone to the camps.

Mr. KAHN. Why have they not gone?

Gen. SHARPE. They have not been called yet, Mr. Kahn.

Mr. KAHN. You would not be able to tell why they have not been called?

Gen. SHARPE. They have not been called into the service because they are not ready to take care of them.

Mr. KAHN. What do you mean by that?

Gen. SHARPE. They expected to take care of them by the 15th of February, and clothe them.

Mr. KAHN. Is that because we have not the necessary clothing, the necessary supplies, and the necessary equipment?

Gen. SHARPE. Yes, sir.

Mr. KAHN. So that out of that first increment there are still one-third of the total called that are not in camp?

Gen. SHARPE. Yes, sir.

Mr. KAHN. How long do you think it will take to get the necessary supplies and clothing and equipment for those men?

Gen. SHARPE. It is expected to be ready by the 15th of February, the date set.

Mr. KAHN. Are you pretty sure that these necessaries will be ready on that date?

Gen. SHARPE. Yes, sir; I think that is reasonably sure.

Mr. KAHN. Have you contracts made for all these things?

Gen. SHARPE. Yes, sir.

Mr. KAHN. Are there penalties involved in case the things are not ready?

Gen. SHARPE. There is no way of enforcing the penalty now, for deliveries.

Mr. KAHN. Why not?

Gen. SHARPE. There is no place we can go on the outside and buy against those men. We have tried to do that, but all the mills were supposed to be operating, so that we could not buy on the outside, and charge them up with the difference in cost.

Mr. KAHN. I suppose the contracts were drawn by competent lawyers?

Gen. SHARPE. The contracts are the same we have always had, and the contractors give bonds, but the bond does not always produce the goods.

Mr. KAHN. I understand that the situation in Europe is exceedingly critical.

Gen. SHARPE. Yes, sir.

Mr. KAHN. That unless we get over there mighty soon, we are going to have a serious time, and so are the French and the English. Is there any possible way of speeding up our getting there?

Gen. GOETHALS. Yes, sir; ships.

Mr. KAHN. Is it all a question of ships?

Gen. GOETHALS. It is all a question of ships.

Mr. TILSON. How many officers came in under the first call, up to the 12th of April, of those who made application before the 12 of April.

Gen. SHARPE. I think there were over 2,000.

Col. DALLAM. There were about 1,840, sir.

Mr. TILSON. Were those men of all ages, from 25 years up?

Col. DALLAM. I could not say the minimum age; but the maximum age was 59.

Mr. TILSON. Colonel, there is a natural suspicion about some of those men who got over the top, that the learned there was to be an examination and passed what might be called a civil-service examination to get in, that they were not the best men in their particular lines to go into the business department of the Army. What would you say as to the class of men you got on first examination?

Col. DALLAM. I would say this, that whenever there is an opportunity offered for a good thing, you do not find the best men in any profession going after it. The finest grade of men in any profession are the men you have to pick out. A great many unpromising men took the examination under the Reserve Corps law. Some of these men have since been discharged.

Mr. TILSON. My own observation of them was that there were a number of men who passed that examination and were commissioned as high as the rank of captain who were good boys, who passed a good civil-service examination, and who would have been all right, possibly, as second lieutenants to have been trained later, and who would possibly have become experienced officers.

Gen. SHARPE. We could not commission them below the grade of captain.

Mr. TILSON. You could not commission them below the grade of captain?

Gen. SHARPE. No, sir.

Mr. TILSON. As a matter of fact, have you not filled up the department with a number of boys who are captains, who really had little experience, and who were simply able to pass a good examination; is not that about the facts?

Gen. SHARPE. No; they appointed some young men, but I do not think the great majority of them were of that class.

Mr. TILSON. And by reason of that you are not able to consider the applications of men of real ability, who are desirous of serving?

Gen. SHARPE. The law authorized us to appoint in the lower grades, and the grade of major only in the Officers' Reserve Corps. We tried, just after the draft, to have men commissioned in the National Army, and it was not till very late, I think somewhere along in August or September, that we got authority to appoint men in the National Army as first and second lieutenants.

The CHAIRMAN. I think it was about October, just before Congress adjourned.

Is there any data you wish to furnish in connection with pay of officers in the line?

Gen. SHARPE. No, sir.

The CHAIRMAN. The next item is "additional pay to officers for length of service, \$3,500,000." That is figured according to law?

Gen. SHARPE. Yes, sir; that is based on law.

The CHAIRMAN. At the top of page 14 there is an item for "pay of officers of the Officers' Reserve Corps, \$231,300," and "pay of officers, National Guard, including Staff Corps, \$231,300."

Lieut. BRETT. That is just put in, Mr. Chairman, so that in the event there should be peace we could have a little money to pay those men.

The CHAIRMAN. I do not think you would need that item during war times.

Lieut. BRETT. No, sir.

The CHAIRMAN. It is only put in there with the idea that peace might be declared during the next fiscal year?

Lieut. BRETT. Yes, sir.

The CHAIRMAN. How do you get at the figures?

Lieut. BRETT. We take 100 men of each grade. The amount is \$231,300, and that provides for 100 men of each grade. It is just to have something in that particular item in case peace is declared.

The CHAIRMAN. As a matter of fact, then, that item might be dispensed with.

Gen. SHARPE. No; that item ought to be in, because unless there is some item in the bill of that kind, if we did have peace and wanted to pay these men we would have no fund out of which to pay them. Even if you only make the amount one dollar it ought to be there.

The CHAIRMAN. You want some sum for this item?

Gen. SHARPE. Yes, sir.

The CHAIRMAN. That is true in reference to both of those items?

Gen. SHARPE. Yes, sir.

The CHAIRMAN. And the same reason applies to the item in reference to the National Guard officers as applies to the officers of the Reserve Corps?

Gen. SHARPE. Yes, sir.

The CHAIRMAN. How do you get at that second item?

Lieut. BRETT. By just taking 100 officers. That is just to comply with the law.

The CHAIRMAN. You could make it \$100 if you want?

Lieut. BRETT. Yes, sir; you can make it any amount you want.

The CHAIRMAN. The next item is "Enlisted men of the line: For pay of one million two hundred and eight thousand three hundred enlisted men of the line, \$478,695,627."

Gen. SHARPE. That is for the enlisted men of the line. The balance of the 1,612,245 men is made up in the staff departments.

The CHAIRMAN. As a matter of fact, General, have you not more than that number of men in the line now?

Lieut. BRETT. No, sir. In the line of the Army we had on November 30, 1,020,486 men.

The CHAIRMAN. On what date?

Gen. SHARPE. On November 30 we had 1,020,486 men.

The CHAIRMAN. Is that the latest figure you have?

Lieut. BRETT. No, sir. Take the Regular Army on December 31, and the National Guard on December 31, and the National Army as it will be when the first draft is complete.

The CHAIRMAN. That is, the 687,000?

Lieut. BRETT. The exact figures are 656,360; we will have 1,488,245 men.

The CHAIRMAN. Then, can you give the committee the exact number in the Regular Army on that date?

Lieut. BRETT. On December 31 it was estimated that on January 5 there would be 383,000. We can give you the exact figures of October 31.

The CHAIRMAN. Give us the exact figures and your estimate figures.

Lieut. BRETT. The exact figures on October 31 for the Regular Army was 332,505; for the National Guard, 380,070. On November

30, for the National Guard, there were 480,000 men. On December 31 the rate of recruiting indicated that there would be on that date in the Regular Army 383,000 and the National Guard 448,885, in the National Army, when it was completed, 656,360, and that would give us 1,488,245.

The CHAIRMAN. Then, as a matter of fact, the probabilities are that before this bill becomes a law you will have more men than you estimate for.

Lieut. BRETT. A great many more. We have a great many more officers now than are carried in this bill.

The CHAIRMAN. How many extra officers?

Lieut. BRETT. There have been commissioned 121,089 officers, and there are more than 110,000 actually in the service. In the Regular Army on December 31 there were 11,948 officers and in the National Guard 16,150. On November 30 there were actually in the National Army and the Reserve Corps combined 82,841, and that makes 110,939; and from November on up to this time both the National Army and the Reserve Corps officers have probably been increased, and it would probably bring the number up to the other figure of 121,089.

The CHAIRMAN. So that, as a matter of fact, instead of appropriating for 62,000, the appropriation ought to be for twice that number.

Lieut. BRETT. In the line they actually had on November 30 77,795 officers, and that was over a month ago.

The CHAIRMAN. Of the 82,840 in the National Army and Reserve Corps, how many are National Army officers and how many are Reserve Corps officers?

Lieut. BRETT. The Adjutant General gave me those figures altogether, and I have not got them separated.

Mr. KAHN. Possibly you can get those figures from The Adjutant General segregated and put them in the hearing.

Lieut. BRETT. Yes, sir. Reserve officers, 59,566; National Army, 23,275.

Mr. KAHN. As I understand the situation, then, the bill shows a deficit on its face now.

Lieut. BRETT. Yes, sir.

Mr. KAHN. In line with the suggestion which has been made, I wish you would also put into the hearings what the additional cost would be for each increment of 500,000 additional men.

Lieut. BRETT. For the officers and men?

Mr. KAHN. Yes.

(For statement of cost, see page 192.)

(Thereupon, at 12.15 o'clock p. m., the committee took a recess until 7.30 o'clock p. m.)

The total extra cost of the pay of the Army because of the increase provided in the act of May 18, 1917, is as follows:

For 1,612,245 men pay is.....	\$247, 785, 934. 05
Foreign-service pay	34, 690, 030. 77
	<hr/> 282, 475, 964. 82
For 3,000,000 men pay is.....	461, 070, 000. 00
Foreign-service pay.....	64, 549, 800. 00
	<hr/> 525, 619, 800. 00

Or \$175.21 per man per year.

In arriving at foreign-service pay it is assumed that 70 per cent of the men are in places where foreign-service pay accrues.

AFTER RECESS.

The committee reassembled, pursuant to the taking of recess, at 7.30 o'clock p. m.

STATEMENTS OF MAJ. GEN. HENRY G. SHARPE, QUARTERMASTER GENERAL, AND MAJ. GEN. GEORGE W. GOETHALS, ACTING QUARTERMASTER GENERAL, ACCOMPANIED BY COL. S. M. DALLAM, MAJ. EZRA DAVIS, CAPT. CHARLES P. DALY, AND LIEUT. J. Q. A. BRETT, QUARTERMASTER CORPS—Continued.

The CHAIRMAN. General, there are a few more questions the members of the committee desire to ask you in regard to the pay of enlisted men in the line.

Mr. FIELDS. General, in line with what we were talking about this morning, in reference to the strength of the Army, I want to ask you how many men we had, on April 1. and how many we had on September 1 in each branch of the service. If you have not those figures at hand, I would be glad if you will put them in the record.

Lieut. BRETT. We will have to put those figures into the hearings.

Strength, 1919.

	Actual.		Estimated.		Desired.	
	Commis-sioned.	Enlisted.	Commis-sioned.	Enlisted.	Commis-sioned.	Enlisted.
Line.....	77,795	1,020,486	78,323	1,208,300		
General Staff.....	91		180	159	348	
Adjutant General.....	152		281		1,783	
Inspector General.....	90		150		296	
Corps of Engineers.....	6,015	78,000	400	(1)	6,550	218,000
Ordnance.....	2,306	15,120	4,000	20,000	7,988	46,000
Quartermaster.....	6,190	62,395	8,300	100,000	18,027	295,118
Medical Department.....	24,060	75,000		124,108	30,000	² 10
Dental Corps.....					3,000	
Veterinarians.....			20,000		1,875	
Sanitary officers.....					3,000	
Ambulance Service.....					214	
Contract surgeons.....						
Nurses.....		³ 4,300				³ 20,434
Judge Advocate General.....	132		240		461	
Signal:						
Proper.....	1,354	21,875	2,000	41,700	5,000	90,000
Aviation.....	2,756	41,988	11,941	112,245	18,006	168,780
Bureau of Insular Affairs.....	3		3		3	
Philippine Scouts.....	145	5,591	182	5,733		
Retired officers on active duty.....	⁴ 449					
Retired men on active duty.....	⁴ 380					

¹ In line.² Per cent.³ Nurses.⁴ Dec. 31, 1917.

Mr. FIELDS. I would like to have the total strength of the officers and men in each branch of the service.

Lieut. BRETT. Do you want the strength of the Regular Army, the National Guard, the National Army, and the Reserve Corps stated separately?

Mr. FIELDS. Yes; I would like to have them stated separately.

(The matter referred to is as follows:)

WAR DEPARTMENT,
OFFICE OF THE QUARTERMASTER GENERAL OF THE ARMY,
Washington, January 9, 1917.

No. 1006-A-E.
From: Acting Quartermaster General.
To: The Adjutant General of the Army.
Subject: Data called for at hearings on Army appropriation bill before House Military Committee January 7 and 8, 1918.

1. What was the strength in (a) commissioned officers and (b) enlisted men on April 1 and September 1, 1917, stating each separately for the Regular Army, the National Guard, the National Army, and the Reserve Corps. Numbers in each grade not required.

GEO. W. GOETHALS,
Acting Quartermaster General.

(Received A. G. O., January 10, 1918.)

[First indorsement.]

111.05, Misl. Div.]

WAR DEPARTMENT,
ADJUTANT GENERAL'S OFFICE,
January 12, 1918.

To the Quartermaster General, inviting attention to the inclosed statement, containing the information requested herein.
By order of the Secretary of War:

H. G. LEARNARD, Adjutant General.

(2 incls. Synopsis made.)

Statement showing strength of commissioned officers and enlisted men on Apr. 1, and Sept. 1, 1917, of the Regular Army, National Guard, National Army, and Reserve Corps.

	Commis- sioned.	Enlisted men
REGULAR ARMY.		
Apr. 1, 1917.....	5,791	121,797
Sept. 1, 1917.....	7,022	308,145
NATIONAL GUARD.		
Apr. 1, 1917.....	2,493	51,234
Sept. 1, 1917.....	12,945	350,256
NATIONAL ARMY.		
Sept. 1, 1917, number reserve officers 59, 556.		
Sept. 1, 1917, National Army not yet mobilized.		
RESERVE CORPS.		
Apr. 1, 1917 (approximately).....		500
Sept. 1, 1917 (approximately).....		50,000

I am attaching a table prepared by me after the passage of the national defense act to show the commissioned and enlisted strength of the Regular Army as prescribed in that act.

It must be borne in mind that the act does not fix the enlisted strength of the Quartermaster Corps. the Signal Corps. nor the Ordnance Department, but leaves them to be fixed from time to time by the President as the demands of the service require. It therefore follows that the President can increase the enlisted strength of these three departments as much as he pleases, being limited only by the power of the Congress to withhold appropriations to pay the men. Hence, the War Department can increase the enlisted strength of these three departments under (1) the national defense act or (2) under the act of May 18, 1917.

Since the enlisted strength of the Medical Department is "5 per cent of the total enlisted strength of the Army authorized from time to time by law," it will vary as the enlisted strength of the three departments named varies.

J. Q. A. BRETT.

Commissioned and enlisted personnel carried in H. R. 12766—Approved June 3, 1916.

	Major gen- erals.	Brig- adier gen- erals.	Col- onels.	Lieut- enant col- onels.	Majors.	Cap- tains.	First lieu- ten- ants.	Second lieu- ten- ants.	Chap- lains.	Total com- mis- sioned.	Super- intend- ent Nurse Corps.	Nurses.	Regi- mental ser- geants major.	Regi- mental supply ser- geants.	Battal- ion and squad- ron ser- geants major.	Color ser- geants.	First ser- geants.	Mess ser- geants.
Annual pay.....													\$540	\$540	\$480	\$432	\$540	\$360
65 regiments of Infantry.....			64	65	195	975	1,040	975	65	3,379			65	195	195	130	975	975
26 regiments of Cavalry.....			25	25	75	375	400	400	25	1,325			25	75	75	50	375	375
21 regiments Field Artillery.....			21	21	47	236	294	257	21	897			21	47	47	42	163	163
Coast Artillery Corps.....		1	24	24	72	360	360	360	26	1,227			7	14		14	282	263
Engineer Corps.....		1	23	30	72	152	148	79	7	512							49	
Indian Scouts.....																	2	
Recruit depot detachments.....															5		28	
Service School detach- ments.....													12	2	17		14	
Disciplinary barracks guards.....															2		4	
Signal Corps:																		
Proper.....	1		3	8	10	30	75			127								
Aviation Section.....			1	1	8	24	114			148								
Ordnance Department.....	1		10	15	32	42	43			142								
Quartermaster Corps.....	2		21	24	63	180		73		369								
Medical Department.....	1		48	82	360	514	514			1,519	1							
Dentists.....							187			187								
Veterinarians.....					7	12	34	65		118								
General officers of the line.....	11	36								47								
General Staff Corps.....			10	10	15	17				52								
Adjutant General's De- partment.....		1	7	13	30					51								
Inspector General's De- partment.....		1	4	8	16					29								
Judge Advocate General's Department.....		1	4	7	20					32								
Bureau of Insular Affairs.....	1		1		1					3								
Detached officers.....			30	30	87	435	440			1,022								
Additional officers.....			45	1			1			47								
Total.....	13	46	341	364	1,115	3,352	3,649	2,209	144	11,233	1		130	333	341	236	1,897	1,781
Military Academy (cadets, 1,332).....			4	3						7					1		17	
Philippine Scouts.....						52	65	65		1,802					13		52	

	Coast Artillery.										Engineers.							
	Ser-geants major, senior grade.	Ser-geants major, junior grade.	Master electricians.	Engi-neers.	Radio ser-geants.	Elec-trician ser-geants, first class.	Elec-trician ser-geants, second class.	Master gun-ners.	Fire-men.	Assist-ant engi-neers.	Me-chanics.	Master engi-neers, senior grade.	Master engi-neers, junior grade.	Battal-ion ser-geants major.	Battal-ion supply ser-geants.	Supply ser-geants.	Mess ser-geants.	Stable ser-geants.
Annual pay.....	\$540	\$490	\$900	\$780	\$360	\$540	\$432	\$480	\$360	\$540	\$288	\$900	\$780	\$540	\$540	\$432	\$432	\$432
Coast Artillery Corps.....	31	64	41	72	93	99	99	62	106	275	526	16	48	16	2	48	48	48
Engineer Corps.....																		
Service School detach-ments.....	4	4	4	6		4	3	4	4					3	3			
Total.....	35	68	45	78	93	103	102	66	110	275	526	16	48	19	5	48	48	48

ARMY APPROPRIATION BILL, 1919.

Commissioned and enlisted personnel carried in H. R. 12766—Approved June 3, 1916—Continued.

[illegible]

WAR DEPARTMENT,
THE ADJUTANT GENERAL'S OFFICE,
Washington, January 21, 1918.

From: The Adjutant General of the Army.

To: The Quartermaster General of the Army.

Subject: Data called for at the hearings before the House Military Committee on 1919 estimates.

1. Having reference to your letter of January 11, 1918, stating that at the hearings before the House Committee on Military Affairs the following information was called for:

"How many officers and how many enlisted men, with the numbers of each in the various grades, have been authorized for the special and technical troops provided for in the proviso contained in section 2 of the act of May 18, 1917?"

You are advised that the following estimates are submitted by the chiefs of the various Staff Corps in reply thereto:

CORPS OF ENGINEERS.

Colonels	27
Lieutenant colonels	28
Majors	130
Captains	717
First lieutenants	1,185
Second lieutenants	855
Total commissioned	2,942
Master engineers, senior grade	476
Master engineers, junior grade	658
Regimental sergeants major	28
Regimental supply sergeants	56
Battalion sergeants major	130
Battalion supply sergeants	127
First sergeants	468
Sergeants, first-class	1,306
Sergeant, buglers	28
Color sergeants	58
Supply sergeants	468
Mess sergeants	491
Stable sergeants	290
Sergeants	4,975
Corporals	9,203
Horseshoers	285
Saddlers	271
Wagoners	3,057
Cooks	2,322
Buglers	932
Privates, first-class	31,306
Privates	62,543
Total enlisted	119,476
Total commissioned	2,942
Aggregate	122,418

The above does not include pioneer regiments of the Regular Army, National Guard, and National Army.

ORDNANCE DEPARTMENT.

Ordnance sergeants	2,800
Sergeants, first-class	400
Sergeants	2,000
Corporals	3,000
Cooks	400
Privates, first-class	3,600
Privates	7,200
Total	20,000

No officers authorized.

SIGNAL CORPS.

Twelve thousand five hundred and seven officers and 151,747 enlisted men of the Signal Corps of grades as shown below have been authorized to date:

	Aviation section.	Signal section.
Major general (1).		
Brigadier generals.....	2	2
Colonels.....	38	12
Lieutenant colonels.....	181	24
Majors.....	358	159
Captains.....	2,578	346
First lieutenants.....	2,774	697
Second lieutenants.....	4,894	441
Master signal electricians.....	2,191	582
Sergeants, first class.....	12,654	3,161
Sergeants.....	14,984	3,690
Corporals.....	12,896	7,077
Chauffeurs, first class.....	5,609	214
Horseshoers.....		230
Cooks.....	4,136	609
Chauffeurs.....	11,799	859
Privates, first class.....	18,585	10,068
Privates.....	30,029	12,330
Buglers.....	24	

QUARTERMASTER CORPS.

Officers:	
Brigadier generals.....	4
Colonels.....	13
Lieutenant colonels.....	49
Majors.....	49
Captains.....	348
First lieutenants.....	1,986
Second lieutenants.....	1,751
Total.....	4,200
Enlisted men:	
Quartermaster sergeants, senior grade.....	187
Quartermaster sergeants.....	1,013
Sergeants, first class.....	2,206
Battalion sergeant major.....	50
Battalion supply sergeants.....	50
First sergeants.....	424
Mess sergeants.....	428
Supply sergeants.....	313
Sergeants.....	11,617
Corporals.....	20,139
Mechanics.....	582
Wagoners.....	796
Cooks.....	2,662
Buglers.....	657
Privates, first class.....	37,668
Privates.....	61,474
Total.....	140,266

MEDICAL DEPARTMENT.

Commissioned :

Colonel.....	1
Lieutenant colonels.....	2
Majors.....	8
Captains.....	32
First lieutenants.....	160
Total.....	203

The total number of enlisted men is 7,605, distributed in the various grades as follows :

Enlisted :

Sergeants, first class.....	169
Sergeants.....	338
Corporals.....	169
Mechanics.....	338
Cooks.....	338
Privates, first class.....	4,394
Privates.....	1,859
Total.....	7,605

Veterinary Corps, National Army, established by G. O. 130, 1917. The total number of commissioned officers authorized, allowing for a total of 400,000 animals, is 1,000, distributed in the various grades, as follows :

Commissioned :

Majors.....	70
Captains.....	200
First lieutenants.....	360
Second lieutenants.....	370
Total.....	1,000

The total number of enlisted men is 16,000, distributed in the various grades as follows :

Enlisted :

Sergeants, first class.....	400
Sergeants.....	800
Corporals.....	800
Farriers.....	3,200
Horseshoers.....	160
Saddlers.....	80
Cooks.....	240
Privates, first class.....	3,440
Privates.....	6,880
Total.....	16,000

Sanitary Corps, established by G. O. 80, 1917. The total number of commissioned officers "may be approximated equal to but not to exceed 1 for every 1,000 of the total strength of the military forces authorized from time to time pursuant to law." Allowing 1 sanitary officer for every 1,000, as above quoted, and distributing proportionately "among the several grades, as in the Medical Corps, now established by law," the number of commissioned officers in each grade would be as follows :

Commissioned :

Majors.....	484
Captains and lieutenants.....	1,016
Total.....	1,500

The authorized enlisted strength at the present time is 3,945.

By order of the Secretary of War.

A. M. FERGUSON, *Adjutant General.*

11.00	20.53	26.03	29.70	11
12.00	22.40	28.40	32.40	12
13.00	24.27	30.77	35.10	13
14.00	26.13	33.13	37.80	14
15.00	28.00	35.50	40.50	15
16.00	29.87	37.87	43.20	16
17.00	31.73	40.23	45.90	17
18.00	33.60	42.60	48.60	18
19.00	35.47	44.97	51.30	19
20.00	37.33	47.33	54.00	20
21.00	39.20	49.70	56.70	21
22.00	41.07	52.07	59.40	22
23.00	42.93	54.43	62.10	23
24.00	44.80	56.80	64.80	24
25.00	46.67	59.17	67.50	25
26.00	48.53	61.53	70.20	26
27.00	50.40	63.90	72.90	27
28.00	52.26	66.26	75.60	28
29.00	54.13	68.63	78.30	29

1. The first part of the document is a list of names and addresses of the members of the committee.

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Grades of commissioned officers, with their yearly pay.

Act approved May 18, 1917:

General	\$10,000
Lieutenant general	9,000

Act approved May 11, 1908:

Major general	8,000
Brigadier general	6,000

Base pay—

Colonel	4,000
Lieutenant colonel	3,500
Major	3,000
Captain	2,400
First lieutenant	2,000
Second lieutenant	1,700

Mr. CALDWELL. Gen. Sharpe, ever since the national-defense act, which prescribed the organization of the Regular Army and also provided for a reorganization of the National Guard, we have been, from time to time, asking the War Department for a statement as to the authorized strength of the Regular Army, and up until the National Army bill was passed it was my impression that the figure was given at something like 287,000, but we never had that number.

The National Army bill has provided for certain technical troops, and the reorganization has gone into effect. The question has been raised as to whether or not the National Army bill authorized more than 287,000 men, exclusive of the special or technical troops. I make this general statement of facts so that you will understand the question I want to ask you.

I wanted to know if the Auditor for the War Department has ever rendered an opinion as to the validity of the paying of men over and above 287,000 in the Regular Army?

Gen. SHARPE. The question has not been raised, Mr. Caldwell. The Comptroller of the Treasury would render an opinion in a matter of that kind.

Mr. CALDWELL. The reason I asked that question is this: You can see how embarrassing it would be if we had more than 287,000 and that number was all that was authorized, and then at some time or another somebody raised the question and said that we could not pay them, or that they were illegally in the Army. Personally, I believe if there is any doubt or any question of that kind, we ought to amend the law, and the quicker we do it the better, in order to bring the enlistments in the Regular Army up to the extent we can get them.

The CHAIRMAN. I think if you will read the act of May 18 you will find that the President has ample authority to increase the Regular troops.

Gen. SHARPE. That is what I understand—that he is given the authority in that bill.

The CHAIRMAN. There was a limitation on it under the national-defense act, but the act of May 18 gave the President the right to make an expansion of the Regular forces.

The CHAIRMAN. The next item is "Additional pay for length of service, \$8,520,000." Of course, that is arrived at purely as a matter of law, and that would not affect, as I understand it, the increase of

the Regular Army at all. That applies only to the forces we have had prior to this increase?

Gen. SHARPE. Yes, sir.

Mr. KAHN. But why is there such a large increase—practically \$5,000,000?

Lieut. BRETT. That is caused by the fact that heretofore, whenever the National Guard has been in the service, they were not drafted under section 111 of the national-defense act. Section 111 says that the National Guard, when drafted into the service, shall have the same pay and allowances and length of service as the Regular Army, and the comptroller rendered a very long decision upon that.

Gen. SHARPE. That applies to officers, too.

Lieut. BRETT. It applies to both officers and enlisted men; and from the amount of National Guard service an enlisted man had on August 5, 1917—the day of the draft—we determine his enlistment period on that day. So that if a man had 20 years' service, if you divide that by 3, you would find that man would be in his seventh enlistment period.

Mr. KAHN. How does that work out in the case of a man in the Regular Army who has had National Guard service?

Lieut. BRETT. He can not get it.

Mr. KAHN. That is where the National Guard gets the better of it!

Lieut. BRETT. Yes.

The CHAIRMAN. Will you put a statement in the hearings showing to what this increase is due and the ruling which gave the decision that National Guardsmen were entitled to this?

Lieut. BRETT. Yes, sir.

(The matter referred to is attached:)

TREASURY DEPARTMENT,
OFFICE OF THE COMPTROLLER.
Washington, August 18, 1917.

The honorable the SECRETARY OF WAR.

SIR: By your reference of the 3d instant of a letter of the Quartermaster General of the Army, my decision is requested upon six questions with reference to continuous-service pay of enlisted men and longevity pay of officers of the National Guard drafted into the service of the United States August 5, 1917, under section 111 of the national-defense act of June 3, 1916 (39 Stat., 211).

The questions as stated by the Quartermaster General are as follows:

“(a) Will officers of the National Guard be entitled, from and including August 5, 1917, to count all service which they have had in the Organized Militia or National Guard, either as officers or enlisted men, in computing their longevity pay?

“(b) If the question (a) be answered in the affirmative, will the officers be entitled to count time which they may have been on the reserve list as enlisted men, either under State laws which may have provided for the furloughing of a soldier to the reserve or under section 69 of the act of June 3, 1916, for the purpose of longevity increase?

“(c) Will enlisted men of the National Guard or of the National Guard Reserve be entitled to count all continuous service which they have had in the Organized Militia or National Guard, whether on the active list or on the reserve list, up to and including August 4, 1917, for the purpose of continuous-service increase of pay from and after August 5, 1917; and if so, by what rule will their enlistment periods on August 5, 1917, be established? Example: Sergeant X first enlisted in the Organized Militia January 2, 1898; discharged

January 1, 1901; reenlisted January 2, 1901; discharged January 1, 1904; again enlisted January 2, 1905; discharged January 1, 1908; reenlisted January 2, 1908; discharged January 1, 1911; reenlisted January 2, 1911; discharged January 1, 1914; reenlisted January 2, 1914; called into Federal service June 19, 1916, and served therein until furloughed to the reserve, January 1, 1917; remained in the reserve until drafted into the service of the United States, August 5, 1917. What enlistment period is he serving in on August 5, 1917, and when will he pass into his next enlistment period, the present law providing that current enlistments shall remain in effect until the end of the present war, and assuming that the war will continue beyond the date of his change to next enlistment period?

"(d) Will enlisted men of the National Guard or of the National Guard Reserve whose service in such organizations is continuous with prior service in the Regular Army or Marine Corps be entitled to count all service in the Regular Army, Marine Corps, National Guard, and Organized Militia, whether active or in the reserve, up to and including August 4, 1917, for the purpose of continuous-service increase of pay from and after August 5, 1917? Example: Corporal Y enlisted in the Organized Militia July 1, 1898; furloughed to the State Reserve June 30, 1901; discharged from the State Reserve June 30, 1904; reenlisted in the Organized Militia July 1, 1904; discharged June 30, 1907; enlisted in Regular Army July 1, 1907; discharged June 30, 1910; enlisted in the Marine Corps July 1, 1910; discharged June 30, 1914; enlisted in National Guard July 1, 1914; furloughed to the Reserve under State law July 1, 1916; drafted into Federal service August 5, 1917. What enlistment period is he serving in on August 5, 1917, and when will he pass into the next enlistment period?

"(e) Will enlisted men who have been furloughed to the National Guard Reserve be entitled to count service with the reserves in the determination of their enlistment periods, or will such service, whether more or less than three months, serve simply to determine the continuity of their active service?

"(f) Will enlisted men of the National Guard or National Guard Reserve who have served one or more enlistments in the National Guard or Organized Militia, and who have remained out of the military service in National Guard or Regular Army more than three months before entering into an enlistment from which their service has been continuous, be entitled to count such service as one enlistment period, so as to be given an additional enlistment period for such prior service upon being drafted August 5, 1917; and, if so, what length of service must such prior service consist of, consideration being given to the fact that many States formerly provided for enlistments in the National Guard or Organized Militia of two years, and possibly some of one year; also to the prior laws providing for 'reenlisted pay periods.' "

The act of May 11, 1908 (35 Stat., 109), provides:

"That hereafter any soldier honorably discharged at the termination of an enlistment period who reenlists within three months thereafter shall be entitled to continuous-service pay as herein provided: * * * *Provided*, That hereafter any soldier honorably discharged at the termination of his first or any succeeding enlistment period who reenlists after the expiration of three months shall be regarded as in his second enlistment; that an enlistment shall not be regarded as complete until the soldier shall have made good any time lost during an enlistment period by unauthorized absences exceeding one day; but any soldier who receives an honorable discharge for the convenience of the Government after having served more than half of his enlistment shall be considered as having served an enlistment period within the meaning of this act; that the present enlistment period of men now in service shall be determined by the number of years' continuous service they have had at the date of approval of this act, under existing laws, counting three years to an enlistment, and the former service entitling an enlisted man to reenlisted pay under existing laws shall be counted as one enlistment period."

The longevity pay of officers in the Army of the United States is governed by sections 1262 and 1263, Revised Statutes, and the acts of June 18, 1878 (20 Stat., 130); February 24, 1881 (21 Stat., 346); and June 30, 1882 (22 Stat., 118). They are entitled to count all time served in the Army or Navy, or both, for longevity purposes. Their right to count service does not depend upon

its continuity. All legal service is counted for said purpose (23 Comp. Dec. 150).

Continuous-service pay of enlisted men of the Army prior to the act of May 11, 1908, was governed by sections 1281, 1282, and 1284, Revised Statutes, as amended by the act of August 1, 1894 (28 Stat., 216).

The act of August 24, 1912 (37 Stat., 590), provided that on and after November 1, 1912, all enlistments in the Regular Army shall be for a term of seven years, the first four years in active service with the colors and the last three years on furlough and with the Army Reserve, as provided for in the act. Said act also provided that for all enlistments accomplished thereafter four years shall be counted as an enlistment period in computing continuous-service pay.

Section 27 of the national-defense act of June 3, 1916 (39 Stat., 185), provides that on and after November 1, 1916, all enlistments in the Regular Army shall be for a term of seven years, the first three years in active service with the colors and the last four years in the Regular Army Reserve provided for in the act. Said act also provides that for all enlistments accomplished thereafter under the provisions of said act three years shall be counted as an enlistment period in computing continuous-service pay.

Sections 57 and 58 of the national-defense act (39 Stat., 157) provide for the composition of the militia and the National Guard.

Section 111 of the national-defense act of June 3, 1916 (39 Stat., 211), relates to the National Guard when drafted into the Federal service and provides:

"When Congress shall have authorized the use of the armed land forces of the United States for any purpose requiring the use of troops in excess of those of the Regular Army, the President may, under such regulations, including such physical examination as he may prescribe, draft into the military service of the United States, to serve therein for the period of the war, unless sooner discharged, any or all members of the National Guard and of the National Guard Reserves. All persons so drafted shall, from the date of their draft, stand discharged from the militia and shall from said date be subject to such laws and regulations for the government of the Army of the United States as may be applicable to members of the Volunteer Army, and shall be embodied in organizations corresponding as far as practicable to those of the Regular Army or shall be otherwise assigned as the President may direct. The commissioned officers of said organizations shall be appointed from among the members thereof, officers with rank not above that of colonel to be appointed by the President alone, and all other officers to be appointed by the President by and with the advice and consent of the Senate. Officers and enlisted men in the service of the United States under the terms of this section shall have the same pay and allowances as officers and enlisted men of the Regular Army of the same grades and the same prior service."

The act of May 18, 1917 (Public, No. 12), in section 1, authorizes the President—

"To draft into the military service of the United States, organize, and officer, in accordance with the provisions of section 111 of said national defense act, so far as the provisions of said section may be applicable and not inconsistent with the terms of this act, any or all members of the National Guard and of the National Guard Reserves; and said members so drafted into the military service of the United States shall serve therein for the period of the existing emergency, unless sooner discharged: *Provided*, That when so drafted the organization or units of the National Guard shall, so far as practicable, retain the State designations of their respective organizations."

Under the proclamation of the President of July 3, 1917, all members of the National Guard and all enlisted members of the National Guard Reserves (with certain exceptions) were drafted into the military service of the United States as of and from August 5, 1917, and the question to be determined is what prior service under the last sentence of section 111 of the act of June 3, 1916, may be counted in fixing the rate of pay at which the officers and men so drafted are entitled to be paid.

The provision of the law is that officers and enlisted men drafted into the Federal service shall receive the same pay and allowances as officers and enlisted men of the Regular Army "of the same grades and the same prior service."

In the decision of this office of August 28, 1916 (23 Comp. Dec.. 152), the view was indicated, though this was not the case before the office at the time, that the prior service contemplated by section 111 of the act of June 3, 1916, was the service in the Organized Militia or National Guard, including both Federal and State service and service in the Army and Navy.

The language of the statute might have been more explicit and words used which would have left no doubt of what was intended, instead of the use of such as have left the meaning more or less doubtful, as is evidently the case from the different views about it, but to my mind Congress could not have meant by the language "the same prior service" merely the *same character of service*. Rather, it seems to me it must have been intended by such language the *same length of service* as well in the militia or guard. (See in this connection sec. 10 of the act of May 18, 1917, Public, No. 12.)

It should be borne in mind that a very small percentage of the members of the National Guard over the country has had any service whatever in the Army or Navy and that the Guard as a whole has had only a few months in the Federal service under the call of the President, and to say that Congress was legislating for this small percentage only seems to me too literal a construction. I have no means of knowing what is the percentage of officers and men who have had service in the Army or Navy; but judging from what we know generally about the composition of the guard, the men, taken as they are from all elements of the community where a company or regiment exists, it must be remarkably small; and certainly Congress could not have been legislating for these only, to the exclusion of the far greater number who have had no such service.

The correct view of the law, in my opinion, is that by the language "the same prior service" is meant the same length of service in the militia or guard, including service in the Army and Navy, if any. The real difficulty comes when we undertake to determine the rate of pay of the enlisted men of the guard drafted into the Federal service, in view of the fact that the act of May 11, 1908, provides for enlistments, enlistment periods, honorable discharges, and reenlistments thereafter, most of which have little or no application in the case of the enlisted men of the Organized Militia or National Guard.

It is different with officers, inasmuch as their right to count service for increase-of-pay purposes does not depend upon enlistment periods or upon the continuity of the service. With them all legal service is counted for such purposes, and under the view I take of the law of June 3, 1916, officers of the National Guard drafted into the Federal service under section 111 of said act are entitled to have counted all legal service which they have had in the Organized Militia or National Guard and in the Army and Navy, if any, in computing their longevity pay.

If the enlisted men of the National Guard drafted into the Federal service under said section 111 of the act of June 3, 1916, are to be paid anything more than in their first enlistment period it must be by an application of the law of May 11, 1908, by analogy. The two acts must be considered together. It will be observed that the act of May 11, 1908, provides:

"That the present enlistment period of men now in service shall be determined by the number of years of continuous service they have had at the approval of this act, under existing laws, counting three years to an enlistment." and also that—

"The former service entitling men to reenlisted pay under existing laws shall be counted as one enlistment period."

Service entitling an enlisted man of the Army to reenlistment pay depends upon three things: (1) A service of five years; (2) an honorable discharge within or at the end of this period of service; (3) a reenlistment within three months (prior to Aug. 1, 1894, 30 days) from date of discharge. In other words, to place a soldier in the status of entitled to "reenlisted pay" he must have completed, prior to May 11, 1908, five years of continuous service, *including one reenlistment*, and then remained out of the service *more* than the time prescribed by law to entitle him to count his service as being continuous. The prescribed time prior to August 1, 1894, was 30 days; after that, three months. An enlisted man of the Organized Militia or National Guard fulfilling these conditions prior to May 11, 1908, is on draft into the Federal service entitled to be credited with one enlistment period. The cases will undoubtedly be few in

number where enlisted men of the National Guard drafted into the military service of the United States have had service of the nature required to place them in a "reenlisted-pay" status, but in the instances where they may have had such service I see no reason why they should not be given credit for one additional enlistment period therefor in determining their enlistment period on the date when drafted.

Under the view I have taken of the last sentence of section 111 of the act of June 3, 1916, in order to give effect to it so far as relates to enlisted men of the National Guard drafted into the Federal service under said section it will be necessary to adopt a rule similar to that prescribed by the act of May 11, 1908, for enlisted men then in service in the Army and applying such a rule here the enlistment period of a man drafted as of and from August 5, 1917, would be found by dividing the time actually served continuously by him in the Organized Militia or National Guard and including Army, Navy, or Marine Corps service prior to August 5, 1917, by 3, which is counting three years to an enlistment period. I can see no other way of giving effect to what I conceive to be the evident intent of Congress in enacting the legislation of June 3, 1916, in section 111. It seems evident to me that Congress intended that prior service in the militia or National Guard should count for continuous-service pay purposes. If any such enlisted man had service which was the equivalent of reenlisted-pay service in the Army that would entitle him to credit for one enlistment period.

I do not think, however, that service with or in the reserves should be counted in determining enlistment periods, but it may be counted for the purpose of determining the continuity of active service, whether such service with the reserves be more or less than three months. In other words, service with the reserves has the effect of making the active service continuous and nothing more.

In view of what has been said I will now take up and answer in their order the several questions submitted.

Question (a) is answered in the affirmative, with this qualification, however, that service as an enlisted man with the reserves may not be counted in computing the longevity pay of officers. The answer to this question answers question (b), which is in the negative.

Question (c) is answered by saying that enlisted men of the National Guard or of the National Guard Reserve will be entitled to count all continuous service they have had in the Organized Militia or National Guard on the active list *only* up to and including August 4, 1917, for the purpose of continuous-service increase of pay from and after August 5, 1917. The enlistment period in which serving on August 5, 1917, will be determined by dividing the time so served by 3, and the integer in the quotient will represent the number of enlistment periods to his credit. To illustrate: If the soldier has served seven years continuously with the Organized Militia or National Guard up to and including August 4, 1917, he will be entitled to credit for two enlistment periods served, and upon his draft into the Federal service on August 5, 1917, he will be entitled to be carried as in his third enlistment period.

In the example you cite, applying the principles announced above, I think the enlisted man will be entitled to be carried in his sixth enlistment period, which is arrived at by giving him credit for one enlistment period for his service from January 2, 1898, to Jan. 1, 1904, which is the equivalent of reenlisted-pay service, and four enlistment periods for his continuous active service from January 8, 1905, to January 1, 1917, when furloughed to the reserve, where he was when drafted into the Federal service.

As to when such enlisted man will pass into his next enlistment period, I am of opinion that the enlistment period in which he is found to be serving on August 5, 1917, will continue during the existing emergency unless sooner discharged. The enlistment period in which serving on August 5, 1917, having been determined, it continues until the termination of his service, which is for the existing emergency unless sooner discharged. (See 15 Comp. Dec., 82.)

Question (d) is answered by saying that enlisted men of the National Guard or of the National Guard Reserve whose service in such organizations is continuous with prior service in the Regular Army or Marine Corps will be entitled to count all active service in the Regular Army, Marine Corps, National Guard, and Organized Militia, up to and including August 4, 1917, for the purpose of continuous-service increase of pay from and after August 5, 1917.

In the example cited in said question, I am of the opinion that the enlisted man on his draft into the Federal service August 5, 1917, will be entitled to be

carried in his sixth-enlistment period. That is arrived at by giving him credit for 15 years continuous active service up to and including August 4, 1917, which is equivalent to five full enlistment periods. The answer to the question as to when he will pass into his next enlistment period is the same as under question (c) supra.

Question (e) is answered by saying that enlisted men who have been furloughed to the National Guard Reserves will not be entitled to count service with the reserves otherwise than to determine the continuity of their active service.

Question (f) is answered by saying that only that prior service in the Organized Militia or National Guard which has been continuous, or has been the equivalent of reenlisted pay service, may be counted in determining the enlistment period in which an enlisted man may be entitled to be carried upon his draft into the Federal service August 5, 1917, under section 111 of the act of June 3, 1916. According to your letter, there has been prior to June 3, 1916, no uniform period of enlistment in the Organized Militia or National Guard in the several States, and such being the case I do not think that the provision of the act of May 11, 1908, which is to the effect that a soldier honorably discharged at the termination of his first or any succeeding enlistment period who reenlists after the expiration of three months shall be regarded as in his second enlistment, can be made to apply by analogy.

Respectfully,

(Signed) W. W. WARWICK, *Comptroller*.

The CHAIRMAN. The next item is, "Pay of enlisted men of the Regular Army Reserve, \$20,865.57."

Lieut. BRETT. That is put in for the same reason that those two items for officers were put in, which we referred to this morning, so that in case peace came we would still be able to pay those three classes of men—the Regular Army Reserve, the Enlisted Reserve, and the National Guard.

Mr. KAHN. Under the provisions of the national-defense act?

Lieut. BRETT. Under the provisions of the national-defense act of June 3.

The CHAIRMAN. And the same thing is true in regard to the next item, "Pay of enlisted men of the Enlisted Reserve Corps, \$20,865.57"?

Gen. SHARPE. Yes, sir.

The CHAIRMAN. And it is also true in regard to the next item, "Pay of enlisted men, National Guard \$20,865.57"?

Gen. SHARPE. That is the same.

Lieut. BRETT. That is the pay for their 25 per cent.

The CHAIRMAN. The next item is "Ordnance Department: Pay of 20,000 enlisted men, \$7,873,800." We had that up with the Chief of Ordnance.

Lieut. BRETT. We just take 1,612,245 and divide that into the Staff Corps and the line in a purely arbitrary manner.

Mr. KAHN. Do you make a purely arbitrary apportionment, or do you get these figures from the Chief of Ordnance?

Lieut. BRETT. No, sir. We asked the Chief of Ordnance how many men he wanted in 1919, and he said he wanted 46,000 men. These 20,000 men, of course, would not make that many.

Mr. KAHN. So you fixed the number at 20,000?

Lieut. BRETT. Yes, sir.

Mr. KAHN. You fixed it on the basis of the statement you made a few moments ago?

Lieut. BRETT. Yes, sir. We just divide it up, giving each one what we consider to be a due proportion of the 1,612,245. They have already in the Ordnance Department 15,120.

Mr. KAHN. Yes; but they tell us they need a total of 78,000.

Lieut. BRETT. They ought not to tell you that, and I will tell you why. This question was asked of Gen. Crozier on November 30, 1917, the number of enlisted men it is estimated that the Ordnance Department will require during the fiscal year 1919, and their reply is quoted, and this is signed by Gen. Crozier, by James L. Walsh, major, Ordnance Department. He says he wants in the Regular Army 8,840 ordnance sergeants, 720 sergeants, 1,200 corporals, 1,080 privates (first class), 2,160 priates; and for the National Army, 5,600 ordnance sergeants, 800 sergeants (first class), 4,000 privates, 7,200 corporals, 800 cooks, 7,200 privates (first class), and 14,400 privates, making a total of 40,000, and the 6,000 additional a total of 46,000. That is under date of December 8, 1917.

Mr. KAHN. That is on the very day on which he came up here to testify.

Mr. SHALLENBERGER. Was not that enlarged figure in anticipation of calling out 500,000 additional men, and not based on an army of a million and a half men?

Lieut. BRETT. The question was asked what he would require for 1919.

Mr. SHALLENBERGER. He had the same-sized army in contemplation when he made that reply to you. Have not all these replies been based on an army of a million and a half men?

Lieut. BRETT. No, sir; they are based on whatever the increase may be. In this case the statement was made that the Army might run to 3,000,000 men, and we wanted to know what they wanted for 1919, knowing that the first estimate was based on 3,000,000 men for 1919.

Mr. KAHN. The 46,000 he called for?

Lieut. BRETT. I do not know whether Gen. Crozier based his reply on the supposition that the Army would be composed of 1,612,245 or 3,000,000, but he was given an opportunity to say just how many enlisted men and how many commissioned officers he wanted for 1919, and that was the reply.

Mr. SHALLENBERGER. I recall that we were told that the first proposition was to make an estimate for three million and a half men, and then it was reduced to one million and a half; but I can not see how you get your figure. It seems to me if one bureau chief figures on a basis of an Army of 3,000,000 men and another bureau chief figures on a basis of an army of a million and a half men, we would not get intelligent estimates in that way of the number of men any bureau chief wanted.

Lieut. BRETT. Until the complete enlisted strength for the particular year is given, the bureau chief is working more or less in the dark as to the number of men which he may require in his bureau.

Mr. SHALLENBERGER. I do not recall how that was given. It occurred to me that possibly the larger figure was for the larger army and that the smaller figure was based on an army of a million and a half men.

Lieut. BRETT. It is possible he so understood.

Capt. DALY. The Quartermaster General, in his original estimate, based it on 3,000,000 men, and that estimate was returned by the War Department with instructions to make the estimate for 1,612,245 men, and the estimate as it has been submitted covers 1,612,245 men.

Subsequently we were directed to submit a supplemental estimate providing for the supplies that it would take more than six months to obtain, based on an army of 3,000,000 men, and the supplemental estimate included those things, but it does not include pay based on an army of 3,000,000 men.

Mr. KAHN. Have you submitted to the House supplemental estimates on these various items?

Capt. DALY. Yes, sir; for three things—regular supplies, Army transportation, and clothing and camp and garrison equipment.

Mr. KAHN. When did you send those in?

Capt. DALY. They were sent in early in December.

The CHAIRMAN. Those are the items printed in italics under those particular items in this bill before you. Those are the only three items I have received, and they are printed in italics in that part of the bill.

Lieut. BRETT. There is one on page 32.

Mr. KAHN. I wanted to know whether or not you have put in any supplemental estimates for pay?

Capt. DALY. No, sir; the pay is based on an army of 1,612,245 men.

Gen. SHARPE. We were instructed not to do that.

Mr. KAHN. If before the beginning of the next fiscal year—that is, before July 1, 1918—the second increment of the National Army should be called into service these estimates would not be sufficient?

Gen. SHARPE. They would not.

Mr. KAHN. You would practically have a deficiency with the beginning of the fiscal year?

Gen. SHARPE. I have a table which shows a statement of the estimates for the Army bill of 1919, showing the original estimate made was for 3,000,000 men, the estimate as modified by the War Department, and then the additional amount which we added to the modified estimate, and then the total of the modified estimate, and then the difference between the total of the modified estimate and the total for 3,000 000 men. I think perhaps the committee would like to have that in the hearings. I also have the two memoranda limiting the number of enlisted men for whom we were to estimate.

Mr. KAHN. I think it might be well to have them put in the hearings.

Gen. SHARPE. It makes the total appropriations for the 3,000,000 men \$5,335,641,092 and for 1,612,245 men \$3,324,991,583.68, or a difference of \$2,011,948,071.20.

(The table referred to is as follows:)

OCTOBER 19, 1917.

Memorandum for the Quartermaster General:

The Secretary of War desires that you submit a modified estimate based on the assumption of 1,500,000 men to be maintained in the Military Establishment during the fiscal year 1918-19.

TASKER H. BLISS,
General, Chief of Staff.

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF STAFF,
Washington, October 22, 1917.

Memorandum for the Quartermaster General:

Referring to the memorandum dated October 19, the number of men called for by the program of the Aviation Section, Signal Corps, in France, is 11,941 officers and 112,245 men. These should be in addition to the 1,500,000 men referred to in memorandum of October 19.

TASKER H. BLISS,
General, Chief of Staff.

Statement of estimate, Army bill, 1919.

Designation of appropriations.	Original estimate, 1919, as submitted by Quartermaster General.	Estimate as modified by the War Department.	Amount of reduction.
Pay, etc., of the Army.....	\$1,692,580,122.99	\$1,003,933,676.04	\$688,646,446.95
Subsistence of the Army.....	424,237,514.52	298,405,655.57	125,831,858.95
Regular supplies, Quartermaster Corps.....	285,957,812.88	203,031,811.00	82,926,001.88
Incidental expenses, Quartermaster Corps.....	10,457,814.59	¹ 10,457,814.59	.....
Transportation of the Army and its supplies.....	875,802,088.52	809,532,025.72	66,270,062.80
Water and sewers at military posts.....	19,735,546.00	19,735,546.00	.....
Clothing and camp and garrison equipage.....	1,904,750,106.98	883,172,148.36	1,021,577,958.62
Horses for Cavalry, Artillery, and Engineers.....	55,451,733.00	28,755,991.00	26,695,742.00
Barracks and quarters.....	26,839,967.00	¹ 23,839,967.00	.....
Military post exchanges.....	1,247,512.00	¹ 1,247,512.00	.....
Roads, walks, wharves, and drainage.....	3,043,443.00	¹ 3,043,443.00	.....
Barracks and quarters, Philippine Islands.....	4,266,830.00	¹ 4,266,830.00	.....
Construction and repair of hospitals.....	25,000,000.00	¹ 25,000,000.00	.....
Quarters for hospital stewards.....	89,100.00	¹ 89,100.00	.....
Shooting galleries and ranges.....	343,110.00	¹ 343,110.00	.....
Maintenance, Army War College.....	12,200.00	¹ 12,200.00	.....
Rent of buildings, Quartermaster Corps.....	100,015.10	¹ 100,015.10	.....
Claims for damage to and loss of private property.	10,000.00	¹ 10,000.00	.....
Rifle ranges for civilian instruction.....	20,000.00	¹ 20,000.00	.....
Civilian military training.....	3,378,000.00	¹ 3,378,000.00	.....
Vocational training.....	75,000.00	¹ 75,000.00	.....
Quartermaster supplies, R. O. T. C.....	2,135,671.00	¹ 2,135,671.00	.....
Quartermaster supplies, schools and colleges.....	84,505.00	¹ 84,505.00	.....
Purchase of land, addition to Jeffersonville Depot.	23,000.00	¹ 23,000.00	.....
Total.....	5,335,641,092.58	3,323,693,021.38	2,011,948,071.20

Statement of estimate, Army bill, 1919—Continued.

Designation of appropriations.	Additional compensation.	Supplemental estimate, fiscal year 1919.	Total estimate, 1919, required to date.
Pay, etc., of the Army.....			\$1,003,933,676.04
Subsistence of the Army.....			298,405,655.57
Regular supplies, Quartermaster Corps.....	\$29,166.67	\$28,722,244.54	231,783,222.21
Incidental expenses, Quartermaster Corps.....	196,428.10		10,654,242.69
Transportation of the Army and its supplies.....	311,978.89	144,647,990.00	954,491,994.61
Water and sewers at military posts.....	379,666.66		20,115,212.66
Clothing and camp and garrison equipage.....	217,708.33	949,342,872.27	1,832,732,728.96
Horses for Cavalry, Artillery, and Engineers.....	3,112.00		28,759,103.00
Barracks and quarters.....	127,991.65		26,967,958.65
Military post exchange.....			1,247,512.00
Reeds, walks, wharves, and drainage.....	8,580.00		3,052,023.00
Barracks and quarters, Philippine Islands.....	23,680.00		4,290,510.00
Construction and repair of hospitals.....			25,000,000.00
Quarters for hospital stewards.....			89,100.00
Shooting galleries and ranges.....	250.00		343,360.00
Maintenance, Army War College.....			12,200.00
Rent of buildings, Quartermaster Corps.....			100,015.10
Claims for damages to and loss of private property.....			10,000.00
Rifle ranges for civilian instruction.....			20,000.00
Civilian military training.....			3,378,000.00
Vocational training.....			75,000.00
Quartermaster supplies, R. O. T. C.....			2,135,671.00
Quartermaster supplies, schools and colleges.....			84,505.00
Purchase of land, addition to Jeffersonville Depot.....			23,000.00
Total.....	1,298,562.30	1,122,713,106.81	4,447,704,690.49

¹ No reduction made in these estimates for the reason that the amounts originally asked for therein are not based entirely on strength, but to meet the requirements based on existing conditions rather than strength.

Mr. GREENE. Gen. Sharpe, do you find from experience with these appropriation bills in fixing an estimate on a given number of men at a time when the Army is being recruited that the figure may be less than you have expected, but that the total cost usually averages up as it runs through the year, because some of the men may be in for a much less period, and the money will be sufficient to cover the final period, and that you have a shorter period at the end?

Gen. SHARPE. It has been in the past estimated on a fixed strength of the Army, and now with the enormous increments coming in I do not think there will be any difficulty.

Mr. GREENE. I anticipated just that answer, and that is why I was trying to figure out whether there could have been such an idea in estimating for only 46,000 ordnance men when it was their expectation to have nearly twice that number, whether it was thought that that was an error and that the amount named would be sufficient or whether it was mostly guesswork?

Gen. SHARPE. No; we were trying to allot to the different bureaus what we considered their proportional number of the 1,612,245 men.

Mr. GREENE. That is, 20,000 for the Ordnance Bureau?

Gen. SHARPE. Yes, sir.

Mr. GREENE. I am talking about the 46,000 asked for by the Chief of Ordnance.

Lieut. BRETT. When Gen. Crozier answered that question he had before him the directions in reference to those supplies which could not be procured within six months, and that provision should be made for 3,000,000 men.

Mr. GREENE. That is in line with what I have said. If you anticipate a fixed total, which might be 40,000 and knew they would come along progressively so that only a few of them would be in for six

months, then the pay would be fixed on the basis of 40,000 men, and perhaps under some circumstances you can tell what the necessary amount would be for the next 6 months or the next 12 months, but in times like this I do not see how it can be done.

Capt. DALY. Along that line the Committee on Appropriations figured the same way, and they cut our estimates of June 15 and of October 6 by \$892,000,000. We have a deficiency estimate in now for a little more than that amount. If they had appropriated all we had asked for, our present deficiency estimate would probably be only \$4,000,000 or \$5,00,000.

Mr. GREENE. That exposes the fallacy of trying to reduce a thing to a mathematical ratio in times like these.

The CHAIRMAN. We have got to have something to go on when we get on the floor of the House.

Lieut. BRETT. We were requested to put into the hearings a statement showing what it would cost for each additional 500,000 men for pay, if it is decided to increase the appropriations before the bill is passed, and it is contemplated by the War Department to call the second draft. In answer to that, if you put in \$290,000,000 for that purpose it will cover each additional 500,000 men.

Mr. QUIN. How many men are they going to take on the next draft on February 15?

Lieut. BRETT. The selective draft law calls for men in bunches of 500,000 each; that is, apart from the special and technical troops.

The CHAIRMAN. The next item is "Quartermaster's Corps: Pay of 100,000 enlisted men, \$39,369,000."

Lieut. BRETT. We had on the 30th of November in the Quartermaster Corps 62,395 men.

Gen. SHARPE. Maj. Davis can give you the figures under our present allotment.

Maj. DAVIS. The authorized strength of the Quartermaster Corps to-day is 154,776. We have in the Quartermaster Corps, estimated to December 31, 109,253.

Mr. KAHN. That is on December 31?

Maj. DAVIS. That is estimated; yes, sir. It is not exact.

The CHAIRMAN. You are not asking for as many as you have?

Gen. SHARPE. We could not, with the Army fixed at a strength of 1,612,245 men.

The CHAIRMAN. Is that based on that sized army?

Gen. SHARPE. As far as we could apportion it.

The CHAIRMAN. How do you arrive at that basis for the number of men in the Quartermaster Corps in that sized army?

Gen. SHARPE. How do we arrive actually at the number of men we have been allotted?

The CHAIRMAN. Yes.

Gen. SHARPE. By the organizations we have been authorized to establish. Maj. Davis can give you the details in regard to that.

Maj. DAVIS. The authorized strength of the Quartermaster Corps, Regular Army, under section 9 of the national defense act, is fixed by the President at 15,000; the strength of the Quartermaster Corps of the National Guard is 9,510; the authorized miscellaneous strength—that is to say, men who do not pertain to any special and technical units—to-day is 55,239; and the remainder allowed out of any special

and any technical units, which are growing from day to day, in accordance with the recommendations made by Gen. Pershing, and also because of certain conditions that arise in this country that necessitate militarizing a peace-time activity that might have formerly been furnished in some other way by the hire of civilian employees, for instance.

So that our strengths are constantly growing, as the result of men that are coming up, and the militarizing of special units in this country, and all units that have gone abroad.

The CHAIRMAN. How many of those special units have you organized up to date?

Maj. DAVIS. We have about 22 different kinds of units.

The CHAIRMAN. Will you put a list of those in the record, and the number in each?

Maj. DAVIS. Yes, sir.

Statement showing special and technical troops, National Army, enlisted personnel National Guard and Regular Army, Quartermaster Corps, authorized to include Dec. 31, 1917.

ARMY APPROPRIATION BILL, 1919.

Authorized.		Totals.		Personnel, each unit, showing grade.																					
Number of units authorized.	Designation of organization.	Authority.	Officers.	Enlisted men.	Officers.						Enlisted men.														
					Colonel.	Lieutenant colonel.	Major.	Captain.	First lieutenant.	Second lieutenant.	Total.	Quartermaster sergeant, senior grade.	Quartermaster sergeant.	Sergeant, first class.	First sergeant.	Mess sergeant.	Supply sergeant.	Sergeant.	Corporal.	Mechanic.	Wagoner.	Cook.	Bugler.	Private, first class.	Privates.	Total.
NATIONAL ARMY.																									
Special and technical troops.																									
74	Bakery companies.....	G. O. 91-98-134, W. D., 1917..	148	7,474	...	...	...	...	1	1	2	...	1	...	...	...	23	15	...	...	2	...	45	15	101
8	Supply companies.....	G. O. 80, W. D., 1917.....	24	2,000	...	...	...	1	1	3	...	...	...	...	1	1	8	16	2	...	4	3	71	143	260
6	Quartermaster mechanical repair shops.	G. O. 99-119, W. D., 1917....	324	6,978	...	...	1	5	24	24	54	6	40	30	1	3	290	116	...	...	22	8	510	134	1,163
1	Animal embarkation depot..	G. O. 131, W. D., 1917.....	4	261	...	...	1	1	1	1	4	1	5	5	...	...	28	11	...	...	4	...	69	138	261
21	Field remount depots.....	G. O. 131, W. D., 1917.....	84	5,481	...	...	1	1	1	1	4	1	5	5	...	...	28	11	...	...	4	...	69	138	1,261
1	Auxiliary remount training depot.	5th Ind. A. G. O., 12/4/17....	4	298	...	...	1	1	1	1	4	1	8	8	...	...	36	13	...	...	5	...	76	151	298
33	Auxiliary remount depots...	G. O. 131, W. D., 1917.....	132	9,834	...	...	1	1	1	1	4	1	8	8	...	...	36	13	...	...	5	...	76	151	298
5	Stevedore regiments.....	G. O. 107, W. D., 1917, and 1st Ind. A. G. O., 11/30/17.	320	12,195	1	1	3	23	24	12	64	12	9	...	12	12	60	240	24	36	36	24	510	1,452	2,439
1	Ship repair shop.....	T. O.	17	425	...	...	1	4	6	6	17	5	5	16	1	1	98	79	...	...	8	2	70	139	425
4	Graves registration service units.	G. O. 104-130, W. D., 1917....	8	200	...	...	...	1	...	1	2	3	...	...	1	1	4	5	1	4	1	...	7	22	56
1	Port embarkation guard and fire companies.	G. O. 107, W. D., 1917.....	11	145	...	...	...	1	5	5	11	...	...	10	...	...	10	20	...	...	2	...	103	...	145
20	Fire truck and hose companies.	G. O. 107, W. D., 1917.....	20	500	...	...	...	...	1	...	1	...	1	3	...	...	3	...	...	...	...	...	6	12	26
5	Motorcycle companies.....	G. O. 92, W. D., 1917, and (*)..	10	185	...	...	...	...	1	1	2	...	...	...	1	...	4	1	...	...	1	...	30	...	37
1	Ice plant company.....	(*).....	15	335	...	...	1	2	6	6	15	1	...	30	1	1	1	32	...	...	6	...	44	218	335
47	Motor supply trains.....	G. O. 120, W. D., 1917, and T. O.	423	21,808	...	...	1	...	...	8	9	...	2	7	...	...	36	194	...	...	12	...	73	140	1,464

Mr. KAHN. Evidently, General, this estimate of yours begins with a deficiency right now?

Gen. SHARPE. Yes, sir. You see, Mr. Kahn, the figures we have here were not received until after the estimates went in. That is one explanation of it. But we could not exceed the number of men for whom we were directed to estimate.

Mr. KAHN. What is going to be the policy of the bureau? Are you going to put in a supplemental estimate, so that this committee can pass upon it, or are you going to the Committee on Appropriations and ask for a deficiency?

Gen. SHARPE. We would like to put in a supplemental estimate.

Mr. KAHN. Do you know how many men of these 109,253 you have estimated you had on December 31 are of the draft age?

Maj. DAVIS. I have no figures for that, sir. Taking the actual strength of the Quartermaster Corps on November 30 and the strength of the corps on December 31, you will recall that covers a period when men of the draft age were permitted to enlist, and it shows a net gain in two months—in reality a month and a half, because there were no enlistments of men of the draft age after December 15—of 46,858. I think it is reasonable to assume that about 99 per cent of those were of the draft age.

Mr. KAHN. They had a right to select the service they wanted to go into?

Maj. DAVIS. Yes, sir.

Mr. KAHN. If you carry out the law and get your full authorized strength of 164,776 men, you will have to resort hereafter to men who are over or under the draft age?

Maj. DAVIS. Except, sir, that under section 150 of the selective-service regulations men of the draft ages may ask for induction, out of order, provided that they are not in the current quota, or provided that any condition that places them in classes 2, 3, or 4 is removed, may come in the service and select the branch of the service that they desire, if there is a vacancy in that branch.

Mr. KAHN. And they still can exercise the right of selection?

Maj. DAVIS. Yes, sir.

Mr. FIELDS. In that connection, an order has been issued——

Mr. MORIN. That has been stopped by telegraph.

Maj. DAVIS. It was stopped by the Quartermaster Corps because our camp was quarantined.

Mr. MORIN. The orders I have seen stopped it on all units except the bricklayers in the Ordnance Department.

We had 18 men in one of the boards in Pittsburgh, and they stopped them all. It went out on the 2d of January. We had 5 men to go to the camp that night, and they were taken off the train.

Maj. DAVIS. I did not know that other bureaus had taken steps to stop it.

Mr. MORIN. It came through from Gen. Crowder, and he said that that was done on advice of the staff officers.

Mr. KAHN. Are there many men offering to enlist in the Quartermaster Corps who are above the draft age?

Maj. DAVIS. Quite a number, sir.

Mr. KAHN. Do you enlist men above the draft age who have special qualifications?

Maj. DAVIS. Yes, sir.

Mr. KAHN. As chauffeurs, for instance?

Maj. DAVIS. We make all enlistments in the grade of private and send the men to our quartermaster's training camp, and there an occupational census is made and the men are placed in the part of the camp they are best fitted for, and they are given instruction, if instruction is needed—and some military instruction is always needed. Later they are promoted to such vacancies as may exist, in accordance with their merit.

Mr. KAHN. How many men can you accommodate at Jacksonville?

Maj. DAVIS. We have construction there for 12,500 enlisted men.

Mr. KAHN. That would take care of only a very small percentage of your total enlisted strength.

Maj. DAVIS. That is quite true; but organizations are being made up constantly that are being sent over sea. Again, there are quite a number of men with the divisions; there are 474 men of the Quartermaster Corps with each division—10 with its headquarters and 464 with the supply train.

In addition to that, each of the camps requires from 150 up to as high as 959 men for the operation of the camp and its utilities. Those numbers vary according to the utilities installed, or according to whatever utilities are called for as a result of the supply of water or heat and light, as the case might be.

Then, again, Gen. Pershing's requirements in the phases in which he has called for troops take a large number.

The ports of embarkation, the established posts throughout the country, the quartermaster mechanical repairs shops, the master repair shops (of which we have three in the United States), the motor-truck repair units, and the ship repair company at the port of embarkation, and others I might mention, if you wish, take a large number of men.

Mr. KAHN. Of course, in all those activities you try to get men who have had previous experience?

Maj. DAVIS. Yes, sir. In addition to that, one item I left out was the bakery company of 101 men. The number of bakers and cooks undergoing instructions, amounting to a very large number, are scattered throughout the country, and we have a large reservoir at Camp Johnston, where the men are undergoing instruction.

Mr. KAHN. Is that a camp of embarkation?

Maj. DAVIS. Not as yet.

Mr. KAHN. You send the boys from Jacksonville to the various ports of the country, and then embark them to go abroad.

Gen. SHARPE. You may be interested, in this connection, in the bakery companies and schools for cooks and bakers, which we have at the National Army camps. We are also establishing those same schools at the National Guard camps, and we are in hopes that with the establishment of those schools it will not be necessary to have to resort, as we did when the National Army was called out, to the employment of a number of civilians as cooks. We will have these men from the different schools to handle the new draft. That saves us about \$100,000 on account of these civilians alone. We save that much money by using our own men, who have been trained.

Maj. DAVIS. Of the 11,677 men that we had at Camp Joseph E. Johnson on December 29 a report just received shows that there were only 366 unskilled, and the remainder of them were skilled men.

Mr. KAHN. How were they designated for that training?

Maj. DAVIS. All the men who enlist are sent there from the recruit depots, and all men inducted while the induction process was on, and when it opens again, are sent there from their local boards.

Mr. KAHN. The local boards sent them?

Maj. DAVIS. Yes, sir.

Mr. KAHN. Have you any commissioned officers in training there at all?

Gen. SHARPE. Yes, sir.

Col. DALLAM. There are 1,119 commissioned officers.

Mr. FIELDS. How long do you keep them in training before you assign them?

Col. DALLAM. Six weeks for the officers.

Mr. FIELDS. How long for the men.

Col. DALLAM. And 30 days for the men.

Mr. KAHN. Can you train them in 30 days to perform the multifarious duties of the Quartermaster's Department?

Maj. DAVIS. By reason of our classification, and the taking of the occupational census of the men, we can place them in lines that they have been trained for in civil life. It requires practical military training to prepare them for our service.

Gen. SHARPE. As an illustration take the chauffeurs. Probably they have had experience before they come to us, but the discipline is lacking, and they do not know how to make use of a map in driving. So there is a map posted down there in the school, and the towns and crossroads are given French names, and the man is told to drive in the motor up through that point [indicating] and up to that point there [indicating], giving the names, and he is given a map, and he has to meet off there another column coming in there [indicating], and the other column is sent in the other direction coming down. He has got to get there at the hour designated, and he can not get any help around there. It is only by using a map that he can do it. The names are absolutely foreign. They do not even know that the crossroads have a name. That is done to familiarize them with the use of maps in driving on the roads.

Mr. KAHN. Are all the truck companies in the Army manned by men from the Quartermaster Corps?

Maj. DAVIS. Only those pertaining to the supply trains and truck companies of the Army. We have to have them for the supply columns along the line of communications.

Mr. TILSON. I would like to ask Gen. Sharpe about his attitude toward skilled men in the National Army who are already in the National Army and wish to be transferred to the Quartermaster Corps in order to be employed in their particular line.

Gen. SHARPE. We try to get them, but they objected to the transfer and objected to taking so many men from the draft for that purpose.

Maj. DAVIS. We took a list of a large number, not only in our corps, but other staff corps, of skilled men, and numerous complaints were had from the division commanders, and under date of November 19 the Secretary of War issued instructions that no more men would be taken from the drafted divisions.

Mr. TILSON. Regardless of their skill or qualifications for any particular work, they must remain in the line, although they might be unfitted for such work, and especially fitted for a particular work in the Quartermaster Corps. Is that correct?

Maj. DAVIS. We can not initiate action. If the man himself initiates the action and his request bears the approval of the local commanding officer and the division commander, the transfer can be effected. We can not initiate the action.

Mr. TILSON. You can not ask for that man by name?

Maj. DAVIS. No, sir.

Gen. SHARPE. It was objected to because it was said that these organizations depended upon John Jones, and if you took him away it would break up the organization.

Maj. DAVIS. If we wish 25 men of a given trade they will gladly give us those men from their divisions, from their own records, thereby saving men that might be vital to their organization.

Mr. TILSON. It seems to me that there is a big reservoir for men of that special work, but they retain them in the line when they are particularly fitted for work in the Quartermaster Corps.

Mr. GREENE. This line of questioning brings out a matter of policy which was referred to this morning, and you may be disposed to amplify it a little.

Under cover, perhaps, of finding the service in your department more in line with their past experience in civil life, it is noticeable that there are a good many men who seem to have some sort of instinctive dread of the trenches, and they are now qualified as most remarkable artisans and craftsmen of one kind or another. Do you find it embarrasses you somewhat to have a great number of applications for the Quartermaster Corps on the supposition that it is more or less a noncombatant arm of the Army?

Gen. SHARPE. Yes, Mr. Greene, it is very embarrassing. While it is not a combatant arm of the service, the ambulance service is the arm of the service where a man is under fire very constantly, without any opportunity of returning the fire. It requires a much higher degree of courage for a man to bear that kind of attack than an attack in which he has an opportunity to hit back.

Mr. GREENE. I can understand, because I have endeavored to explain to men that instead of avoiding that danger, they were running into it. Of course there is always that popular wrong impression of the different activities of the service, anyway, and there are a few of our friends that we have felt were ready to avoid it, and what I wanted to get at was whether you are now so well informed as to some of those activities of the men who, under the cover of patriotism, want to avoid fighting, that you are able to detect them, and in some way to turn away from the Quartermaster Corps the men who might otherwise get in there but not be fitted for that special service, in order to avoid the risk and hazard of the trenches.

Gen. SHARPE. Personally. I have not seen many of those men. Maj. Davis may have seen them.

Maj. DAVIS. During the period from December 1 to 15, when our office was bombarded from every side, there were, perhaps, a very large percentage of men who were gun shy. Their every effort seemed to be to get into the Quartermaster Corps. Of necessity, it

was very hard to charge an individual with that. If he came to us with a story as to his abilities, and upon questioning we found him to have those qualifications, and to all intents and purposes they appeared to be perfectly honest, your opinion might be that he wanted to avoid service at the front. I have no doubt but that there were a number who did come in that 44,000 during the period of about a month and a half who thought they were evading the front-line service. But, on the other hand, they will probably find that it is quite the opposite.

Mr. GREENE. Having that in mind, and the decided gain within the last few months, with the higher development of your organization, are you beginning to think somewhat of the need of reorganization and weeding out of the personnel as men are found to become unfit who had tried to get into this special line of work because of this fear which they tried to conceal, but who are not fitted for that service?

Maj. DAVIS. That particular objection hardly develops, because if a man feels that way and gets in with a body of men who are going over the spirit generally is to want to go over and get in the service. That particular type of man will not dare to show that characteristic, and it will not really develop in service. It may develop in isolated cases, but as yet none has developed.

Mr. GREENE. Being associated with that class of men, but not having a proper purpose in view, he will, in your opinion, partake of the atmosphere and have a change of heart?

Maj. DAVIS. Practically so. It is very likely that because of his life and association with these men he will get the spirit of the men who surround him. I believe we will find that to be true.

Mr. GREENE. My questions were intended to bring out whether you were keeping in mind what we see in civil life, a very manifest direction toward your corps.

The CHAIRMAN. The next item is "additional pay for length of service, \$270,000." Will you put a statement in the record in regard to that?

Lieut. BRETT. Yes, sir.

(The statement desired is as follows:)

The cost report for the fiscal year 1917—received after this estimate went in—shows as actually paid out for this item (service pay of enlisted men, Quartermaster Corps) \$343,597.27. The amount appropriated for 1918 was \$400,000, of which \$300,000 was appropriated in the act of May 12, 1917, and \$100,000 in the act of June 15, 1917. We will need at least \$400,000 for 1919.

Mr. KAHN. There is a little reduction there, from \$300,000 to \$270,000.

Gen. SHARPE. That is for the same reason given heretofore in reference to previous items. It may not be used.

Lieut. BRETT. That is based on what we will need. These are based on the costs in the past.

The CHAIRMAN. The next item is, "Signal Corps: Pay of 153,945 enlisted men, \$60,606,607.05."

Lieut. BRETT. That is based on 41,700 enlisted men in the Signal Corps proper, which amounts to \$16,416,873; 112,245 enlisted men in the aviation section, amounting to \$44,189,734.05, making a total of \$60,606,607.05.

Mr. TILSON. What do you mean by the next item, "Aviation increase, \$4,916,800"?

Lieut. BRETT. That is for the increase allowed under the act of July 18, 1914, and the act of June 3, 1916.

Mr. TILSON. That is for additional pay?

Lieut. BRETT. Fifty per cent.

The CHAIRMAN. How many men are there in that service now?

Lieut. BRETT. The Signal Corps proper, on November 30, had 21,875, and the Aviation Section had 41,988. They want for 1919, 90,000 in the Signal Corps proper, and 168,708 men in the Aviation Section. Increase of pay because of aviation is provided for 20,000 men.

The CHAIRMAN. That is not based on the size of the Army in general, is it?

Lieut. BRETT. I think that is based on an Army of 3,000,000 men.

The CHAIRMAN. So that this appropriation would provide for a Signal Corps for an Army of 3,000,000 men?

Lieut. BRETT. No; this appropriation covers the Signal Corps for an Army of 1,612,245 men, the amount of the estimate being \$60,606,607.05.

Mr. SHALLENBERGER. How many men are provided for the Signal Corps proper in this estimate?

Lieut. BRETT. The actual strength——

Mr. SHALLENBERGER. What is the estimate?

Lieut. BRETT. The estimate for the Signal Corps proper is 41,700.

Mr. SHALLENBERGER. And the actual number?

Lieut. BRETT. The actual number is 21,875.

Mr. FIELDS. How are they going to get those men?

Lieut. BRETT. They can get them either by voluntary enlistments or from the selective draft.

Mr. FIELDS. Men of the draft age can not enlist in the Signal Corps, can they?

Lieut. BRETT. Yes, sir.

Mr. TILSON. That is the one exception; they can enlist at any time.

Mr. OLNEY. They can be transferred to the Signal Corps from the draft Army?

Lieut. BRETT. Yes.

Mr. MORIN. That refers to the order I spoke about a while ago, the order of January 2. We had 18 men in one local board in Pittsburgh, and they could not get in. They stopped them from getting in.

Mr. FIELDS. I know several men who have been trying to get in, but who have not been able to get in yet.

Mr. MORIN. I know hundreds who have been trying to get in.

Maj. DAVIS. I am sure you will find that that is only a temporary suspension.

Mr. MORIN. A lot of men who have been taken into the camp asked to be transferred, and out of about 100 I think only 4 effected a transfer. As soon as a captain says "No; I do not want to break up my company," that ends it. I have been making a special effort to get those Pittsburgh men transferred, and I saw Gen. Crowder, and he was astonished that they had refused to transfer them.

Mr. OLNEY. I think probably one explanation is that it has been because there are so many applications that they can not take care of them. I know in Boston they are 2,000 applications behind.

Mr. MORIN. They need them in the Army.

Mr. OLNEY. That is true.

Mr. MORIN. I am speaking of privates whom they do not put in the school.

Mr. OLNEY. I am speaking of the privates in the nonflying service.

Mr. MORIN. They need men of all kinds.

Mr. ANTHONY. It is only aviators who can be transferred.

Mr. MORIN. There is a squadron of 10 men for each flyer, and the men in those squadrons do work of all kinds.

The CHAIRMAN. That is a matter of policy for the Signal Corps.

Mr. FIELDS. If you can not give to me this information now, I would like to have you put it in the record. When a man is taken in under the draft, and he requests to go to the Aviation Section, is he given that privilege or is he put into the line?

Gen. SHARPE. I understand he has to make his choice, and he is assigned where he has asked to go.

Mr. KAHN. Would he have to make application for transfer through his commanding officer?

Gen. SHARPE. That is what I understand; yes, sir.

Mr. MORIN. Through his colonel and through his captain.

Mr. FIELDS. I have a constituent who has been in the Medical Department, who has been trying to get into the Aviation Section since last spring, and he has not yet been able to make it.

Mr. OLNEY. Is he a flyer?

Mr. FIELDS. No.

Mr. OLNEY. That is quite different.

Mr. KAHN. This item, as I understand you, takes care of the forces that would be required with an army of 1,612,245 men?

Gen. SHARPE. Yes, sir.

Mr. KAHN. If an additional increment of the National Army is called into the service before the next fiscal year, this item, like all the rest, would begin with a deficit?

Gen. SHARPE. Yes, sir.

The CHAIRMAN. Have you fixed the number of men in the Signal Corps, including the Aviation Section, according to each division of the Army?

Lieut. BRETT. Yes.

The CHAIRMAN. Would you have too many men in the Signal Corps in proportion to a division?

Lieut. BRETT. Yes, sir; there is one field signal battalion which is with the division. That is according to the table of organization.

The CHAIRMAN. How many men are in that?

Lieut. BRETT. Two hundred and forty-one men and seven enlisted medical men.

The CHAIRMAN. With each division?

Lieut. BRETT. With each division; yes, sir.

Mr. GREENE. There is sometimes a spirit of criticism in civil life as to the multiplicity of officers, and it is difficult for the lay mind to understand why a man who works, for instance, as a stevedore, which is associated in their minds with a simple kind of toil, should be a

sergeant, first class, or a second lieutenant. I think the committee understands, but the record might be well employed in giving an explanation, to be quoted. These men are given these grades, even up to that of second lieutenant, in order to establish not only the military command necessary to such a kind of semimilitary employment, but for pay purposes. So that a second lieutenant stevedore practically amounts to a foreman getting that pay. That is how it comes up, is it not?

Gen. SHARPE. Yes, sir.

Mr. GREENE. I think it would be well to have such an explanation to give to our friends on the floor, who sometimes think of a second lieutenant as a man of blood and iron with a cannon on his shoulder, and they do not see why he should be a stevedore.

Gen. SHARPE. It is a special organization, and different entirely from the ordinary laborer's work, requiring men of technical training in the use of the various machines for unloading the vessels and also requiring a knowledge of how to load the vessel itself. Of course, the foremen must be skilled men in that particular line of work, and they must be paid salaries which the work entitles them to. The work naturally develops, in the main, in operating various machines on the dock itself.

Mr. GREENE. I had in mind simply that the statement might show that the use of the military grades and the pay was something in the matter of bringing it into the military organization and does not imply a military command, so far as his place in the organization is concerned.

Gen. SHARPE. It does not in any of our organizations. That is one of the unfortunate things we have always had in our service, where we have maintained a military title instead of a title indicative of the work which is done. It would have been much better if we had adopted, as is the case in other armies, a title which recognizes the importance of the work done.

Take, for instance, the French Army, if I may. Officers go into that corps from the line of the army, and they are graduates of a school which is provided for that corps.

After graduation a man then enters the corps as an assistant intendant. He goes in that corps because of the more rapid promotion in the line, and because he probably likes that work.

Of two captains, the senior one in the line who went into the staff and then became an assistant intendent would salute his junior the day he met him on the street after he got his position, recognizing the subordination of supply to the command; but as an officer this man wears a distinct uniform, and he gets his promotion only in that corps.

They are never addressed by their military title. They are addressed either as field intendant or subintendant. Their rank in the military hierarchy starts with the grade of captain and runs to major general, and they are never addressed by the military titles at all, and therefore the importance of the work which the men are doing is recognized at once. We have, unfortunately, always had the other idea, that we ought to give military titles.

Mr. KAHN. I think the German Army has a plan of that kind.

Gen. SHARPE. In the German Army it is a little different. The corps is made up of military officials and civilians. They are no officers in that branch of the service in the German Army.

Mr. KAHN. In the quartermaster department?

Gen. SHARPE. Yes; they wear a uniform and are saluted by the enlisted men as any other officer. Personally, I can not tell their uniforms apart. They look exactly alike to me, except that the men in the quartermaster department do not wear spurs. This is the only way I can tell them from the line officers. The uniforms look identically the same, except for that exception. They are military officials only, but the great majority of that corps is made up of civilians.

Mr. KAHN. Just as it is in our Army?

Gen. SHARPE. No; there are some of the minor officials in this corps who are civilians. The military officials are heads of the corps.

In the English Army it is more like ours, except that they do not have any detailed officers; they are all permanent officers in their corps.

Mr. KAHN. By the way, how has the detail system worked out in this war?

Gen. SHARPE. The detail system has ruined the Quartermaster Department. We practically lost 66 men when the war started.

Mr. KAHN. How?

Gen. SHARPE. By assignment to line positions in the National Army.

Mr. KAHN. How long had those men been with the Quartermaster Corps?

Gen. SHARPE. From two to four years.

Mr. KAHN. And they had required a great deal of very useful information?

Gen. SHARPE. Very useful; yes, sir.

Mr. KAHN. That could have been utilized to great advantage in preparing this country for this war?

Gen. SHARPE. It would have been very useful.

Mr. KAHN. But when the war broke out they preferred to be transferred to their positions in the line?

Gen. SHARPE. They were transferred sometimes without being given any discretion, and they were transferred because if they had not been they would lose their rank and be jumped over.

Mr. KAHN. That materially interfered with the efficiency of the corps?

Gen. SHARPE. It very seriously crippled the Quartermaster's Department.

Mr. KAHN. Was the order of the Secretary of War or the Chief of Staff to the effect that no staff officer should get promotion responsible for that condition? You recall that at first——

Gen. SHARPE. No permanent officers of the staff.

Mr. KAHN. Was that only for permanent officers?

Gen. SHARPE. Detailed officers were given the advanced rank in the National Army.

Mr. KAHN. In the organizations they joined?

Gen. SHARPE. Yes, sir.

Mr. KAHN. But the detail system, when the war broke out, practically broke down, or at least it disrupted your Quartermaster Corps in a measure?

Gen. SHARPE. Just the same as it did before we had the detail system in the Spanish War, when they took men from the different staff departments and gave them volunteer commissions.

Mr. KAHN. Is there any way of stopping that kind of a performance?

Gen. SHARPE. I do not know of any, except to stop the detail system, except in the lower grades, as they have in the Ordnance Department. I think that is a very excellent detail system, because you can get good men; and if they are responsive and like your work, you can use them on. But with us we must lose them after four years and can not get them back until two years later.

Mr. KAHN. Have you recommended any change in legislation in reference to that matter?

Gen. SHARPE. I have recommended that the law as it affects the Ordnance Department shall be applied to our department. It is a very serious condition which we would have had if it had not been that there were about 50 permanent officers in the corps. But that is not enough to disburse this enormous sum of money we have to disburse, amounting to over \$4,000,000,000, or three times the amount of money which it cost to run the Government a year before the war commenced.

Mr. KAHN. According to your statement you really lost more detailed officers than you had permanent officers in the corps?

Gen. SHARPE. Yes; we lost 66 officers. I think some of them have gotten back, but we have not gotten them all back.

Mr. SHALLENBERGER. Is this provision a matter of legislation?

Gen. SHARPE. Yes; it is a matter of legislation.

Mr. SHALLENBERGER. It would require congressional legislation to correct it?

Gen. SHARPE. Yes, sir.

Mr. CALDWELL. Gen. Sharpe, I remember very distinctly that at the time we had the Mexican trouble you told us of the plans you had in the Quartermaster Department, that you had worked out three or four different sets of things that could be done in the event of hostilities occurring, so that the next morning after it was decided to send a force into Mexico everybody would know exactly where they were going, or something of that kind. Did we have such a plan as that for this war?

Gen. SHARPE. Not in the Quartermaster Department. We did not expect such a thing as this. I think all our studies have been confined to an invasion of Mexico, or possibly an expedition to Cuba or some of the South American States.

I do not think before 1914, or probably much later than that, anyone expected any such war as this that this country would be engaged in.

The CHAIRMAN. The next item is "additional pay for length of service, \$150,000."

Gen. SHARPE. That is based on the law.

Lieut. BRETT. It is all figured up, with the number of men they are supposed to have in the service, and the length of service that entitles them to service pay.

The CHAIRMAN. Will you put in the record the number of those men?

Lieut. BRETT. Yes, sir. The estimate for service pay is based on 2,572, with sufficient service to entitle them to service pay. The average amount for service pay for enlisted men of the Signal Corps is \$4.86 per month.

The CHAIRMAN. The next item is, "Medical Department: Pay of 124,108 enlisted men, \$49,146,078.52."

Gen. SHARPE. That is, for 124,108 enlisted men.

The CHAIRMAN. That is based on an Army of 1,612,245 men?

Lieut. BRETT. Yes, sir.

The CHAIRMAN. How many men are actually in the Medical Department now?

Lieut. BRETT. On November 30 they had 75,000 men.

The CHAIRMAN. Is that the latest figure you have?

Lieut. BRETT. Yes, sir.

Mr. SHALLENBERGER. Did you give us the number they asked you to furnish?

Lieut. BRETT. They asked for 10 per cent of the total strength of the Army.

Mr. SHALLENBERGER. That would be 161,000 men.

Lieut. BRETT. Yes, sir.

Mr. QUIN. What do the 75,000 men in the Medical Department consist of?

Lieut. BRETT. Those are the enlisted men in the Medical Department, consisting of hospital sergeants and on down to privates. They are hospital attendants.

Mr. KAHN. Some of them are ambulance drivers?

Lieut. BRETT. Yes, sir. They perform all the services that enlisted men perform in the Medical Department.

Mr. TILSON. That includes sanitary troops?

Lieut. BRETT. Yes.

Mr. QUIN. Does that also include the doctors?

Lieut. BRETT. No, sir; the doctors are commissioned.

Mr. KAHN. Is this department also affected by that order that no man shall enlist of draft age after December 15?

Maj. DAVIS. That affects all corps.

Mr. KAHN. Hereafter they can only fill up the number they want in excess of the 75,000 they now have by using men who are over the draft age or who are under 21 years of age?

Maj. DAVIS. Or by induction. The process of induction is practically enlistment, except that it is performed through the local board instead of through the recruiting officer. It is practically the same thing.

Mr. KAHN. In this item, too, if the Army is increased there would be a deficiency?

Gen. SHARPE. Yes, sir; under their proportion of 10 per cent they would be entitled to 300,000 men.

Mr. KAHN. If you have an Army of 3,000,000 men?

Gen. SHARPE. Yes, sir.

Mr. KAHN. And they wanted 161,000 for the Army we now have?

Gen. SHARPE. Yes, sir.

Mr. KAHN. You allowed them only 124,108?

Gen. SHARPE. Yes, sir.

Mr. KAHN. Who is going to win out in this proposition? Are you going to get away with your figures?

Gen. SHARPE. They will probably get the increase; but the point is this: If we simply made the greater number of men in the line of the Army, the pay would be practically the same.

Mr. KAHN. If they have their way, this item already represents a deficiency, does it not—this item of \$49,000,000—without any increased increments of the Army?

Gen. SHARPE. Yes, sir.

Lieut. BRETT. Of course, you have to bear in mind that the item for pay is a lump sum.

Mr. KAHN. Yes; I am aware of that fact.

The CHAIRMAN. The question is, Why did you estimate for less than they asked for?

Lieut. BRETT. Because we are limited. The number of enlisted men that the bureau chiefs have asked for, outside of the fighting men, is 1,117,898. If you gave them all of the men they asked for you would not have many men in the trenches.

Mr. KAHN. Some day some bureau chief will get up and say, "I asked for all these things, and Congress would not give them to me," and will put the blame on Congress. I, for one, want to know what you want, because I do not propose to have the buck passed to Congress this time.

Leut. BRETT. In the same way the bureau chiefs have asked for 96,577 commissioned officers, and we have 100,000 altogether. That would leave 449 officers for the line if they were given all they asked for.

(Copy of request for authority to estimate for larger number of enlisted men is shown on page 257.)

The CHAIRMAN. The next item is, "Additional pay for length of service, \$360,000." That is figured, according to law, in the same way as the other items for additional pay for length of service?

Gen. SHARPE. Yes, sir.

The CHAIRMAN. The next item is for "Pay of clerks, messengers, and laborers, office of the Chief of Staff."

Gen. SHARPE. The total of that item amounts to \$160,240. This is approved by the Secretary of War. It includes the following employees: One chief clerk, at \$2,250; 1 clerk, at \$2,250; 6 clerks, at \$2,000 (increase of 1 submitted), \$12,000; 8 clerks, at \$1,800 each (increase of 1 submitted), \$14,400; 13 clerks, at \$1,600 each (increase of 1 submitted), \$20,800; 21 clerks, at \$1,400 each (increase of 1 submitted), \$29,400; 24 clerks, at \$1,200 each, \$28,800; 26 clerks, at \$1,000 each (increase of 14 submitted), \$26,000; 1 captain of the watch, at \$900; 6 watchmen, at \$720 each, \$4,320; 1 gardener, at \$720; 1 packer, at \$840; 1 chief messenger, at \$1,000; 3 messengers, at \$840 each, \$2,520; 15 messengers, at \$720 each, \$10,800; 2 laborers, at \$720 each, \$1,440; 1 laborer, at \$600; 5 charwomen, at \$240 each, \$1,200; in all, \$160,240.

The CHAIRMAN. An increase of how many?

Headquarters clerks increased under following acts:

Clerks, etc., in the Office of the Chief of Staff:

Authorized by act of May 12, 1917—

1 chief clerk, at \$2,250 per annum-----	\$2, 250
3 clerks, at \$2,000 each per annum-----	6, 000
6 clerks, at \$1,800 each per annum-----	10, 800
10 clerks, at \$1,600 each per annum-----	16, 000
12 clerks, at \$1,400 each per annum-----	16, 800
17 clerks, at \$1,200 each per annum-----	20, 400
8 clerks, at \$1,000 each per annum-----	8, 000
1 captain of the watch, at \$900 per annum-----	900
6 watchmen, at \$720 each per annum-----	4, 320
1 gardener, at \$720 per annum-----	720
1 packer, at \$840 per annum-----	840
1 chief messenger, at \$1,000 per annum-----	1, 000
3 messengers, at \$840 each per annum-----	2, 520
15 messengers, at \$720 each per annum-----	10, 800
2 laborers, at \$720 each per annum-----	1, 440
1 laborer, at \$600 per annum-----	600
5 charwomen, at \$240 each per annum-----	1, 200
	<hr/>
	104, 590
	<hr/>

Authorized by act of June 15, 1917—

2 clerks, at \$2,000 each per annum-----	4, 000
1 clerk, at \$1,800 per annum-----	1, 800
2 clerks, at \$1,600 each per annum-----	3, 200
8 clerks, at \$1,400 each per annum-----	11, 200
7 clerks, at \$1,200 each per annum-----	8, 400
4 clerks, at \$1,000 each per annum-----	4, 000
	<hr/>
	32, 600
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Clerks and messengers at headquarters of Territorial departments, Territorial districts, tactical divisions and brigades, and service schools:

Authorized by the act of Oct. 6, 1917—

7 clerks, at \$2,000 each per annum-----	14, 000
11 clerks, at \$1,800 each per annum-----	19, 800
14 clerks, at \$1,600 each per annum-----	22, 400
32 clerks, at \$1,400 each per annum-----	44, 800
57 clerks, at \$1,200 each per annum-----	68, 400
49 clerks, at \$1,000 each per annum-----	49, 000
39 messengers, at \$720 each per annum-----	28, 080
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	246, 480
	<hr/>
12 clerks, at \$2,000 each per annum-----	24, 000
36 clerks, at \$1,800 each per annum-----	64, 800
67 clerks, at \$1,600 each per annum-----	107, 200
100 clerks, at \$1,400 each per annum-----	140, 000
285 clerks, at \$1,200 each per annum-----	342, 000
500 clerks, at \$1,000 each per annum-----	500, 000
100 messengers at temporary headquarters, at \$720 each per annum-----	72, 000
	<hr/>
	1, 250, 000
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15 clerks, at \$2,000 each per annum-----	30, 000
32 clerks, at \$1,800 each per annum-----	57, 600
120 clerks, at \$1,600 each per annum-----	192, 000
318 clerks, at \$1,400 each per annum-----	445, 200
895 clerks, at \$1,200 each per annum-----	1, 074, 000
370 clerks, at \$1,000 each per annum-----	370, 000
	<hr/>
	¹ 1, 628, 600

¹ Should be \$2,188,800.

Gen. SHARPE. An increase of 1 clerk at \$2,250; an increase of 1 clerk at \$2,000; an increase of 1 clerk at \$1,800; an increase of 1 clerk at \$1,600; an increase of 1 clerk at \$1,400; and an increase of 14 clerks at \$1,000.

The CHAIRMAN. There is a total increase of 19, is there not?

Lieut. BRETT. In reference to this item Gen. Bliss says:

[Memorandum for the Quartermaster General.]

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF STAFF,
Washington, August 8, 1917.

The Secretary of War has approved the following estimate for 1919:

Pay of clerks, messengers, and laborers, office of the Chief of Staff.

1 chief clerk, at \$2,250 per annum	\$2, 250
1 clerk, at \$2,250 per annum	2, 250
6 clerks, at \$2,000 each per annum	12, 000
8 clerks, at \$1,800 each per annum	14, 400
13 clerks, at \$1,600 each per annum	20, 800
21 clerks, at \$1,400 each per annum	29, 400
24 clerks, at \$1,200 each per annum	28, 800
26 clerks, at \$1,000 each per annum	26, 000
1 captain of the watch, at \$900 per annum	900
6 watchmen, at \$720 each per annum	4, 320
1 gardener, at \$720 per annum	720
1 packer, at \$840 per annum	840
1 chief messenger, at \$1,000 per annum	1, 000
3 messengers, at \$840 each per annum	2, 520
15 messengers, at \$720 each per annum	10, 800
2 laborers, at \$720 each per annum	1, 440
1 laborer, at \$600 per annum	600
5 charwomen, at \$240 each per annum	1, 200
Total appropriation	160, 240

1. The appropriation for the civilian personnel of this office for the fiscal year ending June 30, 1918, was as follows:

Chief clerk, \$2,250	1
Clerks:	
\$2,000	3
\$1,800	6
\$1,600	10
\$1,400	12
\$1,200	17
\$1,000	8
	57
Captain of the watch, \$900	1
Watchmen, \$720	6
Gardener, \$720	1
Packer, \$840	1
Chief messenger, \$1,000	1
Messengers, \$840	3
Laborers, \$720	2
Laborer, \$600	1
Messengers, \$720	15
Charwomen, \$240	5

2. The clerical force being insufficient to accomplish the work required, an additional force was requested, and in the urgent deficiency bill, commonly

known as the three billion dollars bill. provision was made for 24 additional clerks, as follows:

Clerks:

\$2,000	2
\$1,800	1
\$1,600	2
\$1,400	8
\$1,200	7
\$1,000	4
	<hr/> 24

3. Even with this additional force of 24 clerks, it has been found to be impossible to transact the work of the office without detriment and delay to the public business in its charge, and accordingly estimates for 9 additional clerks for incorporation in the so-called five-million-dollar bill have heretofore been made by this office, as follows:

Clerks:

\$2,250	1
\$2,000	1
\$1,800	1
\$1,600	1
\$1,400	1
\$1,000	4
	<hr/> 9

4. The 24 clerks referred to in paragraph 2 are already on duty in this office, and the 9 additional clerks referred to in paragraph 3 will also be employed if authorized by Congress. The Secretary of War, therefore, directs that these 33 clerks be incorporated in the regular estimates for the fiscal year ending June 30, 1919.

5. Owing to the constantly increasing volume of correspondence and the business connected therewith, it is certain that the clerical force now available and the additional clerks already requested will be insufficient to meet the clerical needs of this office. It is difficult at the present time to state positively the total number of clerks that will be required, but it is believed that at least 10 additional clerks will be needed to dispose of the rapidly increasing work, and the Secretary of War has therefore authorized this office to secure this additional number of clerks, at \$1,000 each per annum.

6. No addition to the personnel of the subclerical force is contemplated.

TASKER H. BLISS,
Major General, Acting Chief of Staff.

Capt. DALY. That is 43 clerks more than were appropriated for in the Army appropriation bill of 1918.

Mr. KAHN. How many additional did they get in the urgent deficiency act?

Lieut. BRETT. They got 24. They have asked for 9, and now they ask for 10 more.

The CHAIRMAN. Are they all under civil service?

Lieut. BRETT. I think so.

The CHAIRMAN. The next item is, "Pay of clerks and messengers at headquarters of the several territorial departments, territorial districts, tactical divisions and brigades, and service schools."

Lieut. BRETT. That provides for 111 clerks, at \$1,800 each; 321 clerks, at \$1,600 each; 768 clerks, at \$1,400 each; 2,132 clerks, at \$1,200 each; 1,289 clerks, at \$1,000 each; and 139 messengers, at \$720 each; making a total of \$5,838,080.

The CHAIRMAN. What is the increase in the number of those clerks over those provided for in the Regular Army appropriation bill of last May?

Lieut. BRETT. I think the amount of that appropriation was \$1,626,000, which was considerably less than what they asked for.

I think they asked for 3,570 clerks and messengers altogether, but you did not give them anywhere near what they wanted. The number of clerks and messengers carried in this appropriation bill will suffice for 3,000,000 men, I was informed this afternoon.

The CHAIRMAN. That is, the number you are asking for here?

Lieut. BRETT. The clerks asked for in this bill.

Mr. CALDWELL. Will all these clerks and other employees be needed if we only have an army of 1,612,245 men?

Lieut. BRETT. They will not be authorized by the War Department. The money will not be taken out of the Treasury.

Mr. FIELDS. Then, if the whole appropriation is made, you will only use such a part of it as you need?

Lieut. BRETT. That is the idea.

Mr. FIELDS. Why did you estimate in this item for an army of 3,000,000 men? You only have an army of 1,612,245 men.

Lieut. BRETT. This was done by order of the Secretary of War. That is our authority for making the estimates. Gen. McCain can answer that question.

Mr. SHALLENBERGER. Are the field clerks in this item?

Lieut. BRETT. Yes, sir; they are in this item. They are not in the War Department.

The CHAIRMAN. Are they also under civil service?

Lieut. BRETT. No, sir; they go into the service after an examination.

Mr. OLNEY. A very complete examination?

Lieut. BRETT. A very complete examination and a very stiff one.

The CHAIRMAN. How are they selected?

Lieut. BRETT. They are selected because of special qualifications.

The CHAIRMAN. Who has the authority to select them?

Lieut. BRETT. I think Gen. McCain has that authority.

The CHAIRMAN. The division commanders do not name them?

Lieut. BRETT. I could not state as to that.

Capt. DALY. They are selected under rules that are published by Gen. McCain, and the division commanders can make recommendations, but I think the appointments are made by The Adjutant General.

Mr. TILSON. Are they selected here and sent out to the various field headquarters, or are they selected by the local commanders of the various headquarters?

Mr. FIELDS. One was appointed from my State and was required to take a physical examination, and he had to come here for his mental examination.

Mr. KAHN. Have these clerks any military rank?

Capt. DALY. No military rank, but they have a military status.

Mr. SHALLENBERGER. Are these the same clerks who are to be made assistant adjutants general under the act?

Capt. DALY. These clerks are covered by that bill. That bill was intended to cover these clerks.

Mr. OLNEY. What is the pay of these clerks?

Lieut. BRETT. It runs from \$1,000 to \$2,000.

Mr. KAHN. And do you give them quarters and heat and light?

Lieut. BRETT. Yes, sir.

Mr. KAHN. How many clerks in the War Department get commutation of quarters and heat and light?

Gen. SHARPE. None of the clerks in the civil service get heat and light. But these are not War Department clerks. They are field clerks.

Capt. DALY. Two hundred quartermaster clerks.

Gen. SHARPE. But they can not be employed in Washington.

Lieut. BRETT. They are clerks with divisions.

Capt. DALY. These clerks, before they become entitled to commutation, must have had 12 years' service.

Mr. CALDWELL. Is this allowance given to field clerks when they are in the field?

Lieut. BRETT. No; no officer, under the present law, in the field gets anything in the shape of quarters except a tent.

Mr. CALDWELL. You say these clerks only have a military status and I was wondering whether they could get any commutation in the field.

Lieut. BRETT. Those who are in the field get none. They get a tent. Those who are at department headquarters, if they have had 12 years' service, get commutation for two rooms at \$12 a room a month, and their allowance for heat and light depends on where they are. If they are at a military post they get it in kind.

Mr. FIELDS. What are the salaries of the field clerks?

Lieut. BRETT. From \$1,000 to \$2,000. None of the clerks get any commutation of quarters and heat and light unless he has had 12 years' service.

Mr. SHALLENBERGER. Where are the \$2,000 men in this list located?

Lieut. BRETT. I imagine those are at department headquarters.

Mr. SHALLENBERGER. Are they in this list?

Lieut. BRETT. Yes, sir; they are in the 51.

Mr. KAHN. Do the provisos at the end of the section pertain to clerks already provided for by the law?

Gen. SHARPE. Yes, sir. Those appear every year.

The CHAIRMAN. The next item is, "General Staff Corps: For pay of three hundred and forty-seven officers, \$802,611.00."

Gen. SHARPE. That provides for 347 officers, the total amount being \$802,611.

Lieut. BRETT. The act of June 3, 1916, as amended, provides for 91 officers, but these 347 are my own allowance. Under date of January 3, 1918, the acting secretary of the General Staff submitted a reply, which is based on a study of the War College and they make the number 348, which is one more than I have got here. They want 3 generals, 1 major general, 9 brigadier generals, 50 colonels, 110 lieutenant colonels, 126 majors, and 59 captains, a total of 348.

The CHAIRMAN. Under what authority do they ask for that number?

Lieut. BRETT. Under the authority of the act of May 18.

The CHAIRMAN. How many officers have they in the General Staff now?

Lieut. BRETT. They have 91.

The CHAIRMAN. They are full up?

Lieut. BRETT. Yes, sir.

The CHAIRMAN. How long have they had the complete number?

Lieut. BRETT. I guess they had them soon after the act was passed, as soon as they could get them.

Mr. SHALLENBERGER. What was the act of May 18?

Lieut. BRETT. That is the selective-draft act.

Mr. SHALLENBERGER. Was there any limit at all to the number of officers in the General Staff?

Lieut. BRETT. The act authorizes the President to increase the number temporarily.

Mr. SHALLENBERGER. To what limit did we raise the General Staff in that act?

Lieut. BRETT. I do not think there is any limit; there is no limit.

Mr. SHALLENBERGER. The Secretary of War or the President makes the General Staff as large as he wants it?

Lieut. BRETT. Yes, sir; he fixes the number.

Mr. KAHN. Has the President or Secretary of War fixed the figure for the General Staff Corps?

Lieut. BRETT. I judge the Secretary of War has approved this figure.

Mr. KAHN. Three hundred and forty-seven?

Gen. SHARPE. This was only a few days ago. I understand all of those War College estimates have been brought up in this form, receiving the approval of the Chief of Staff.

Mr. SHALLENBERGER. As I understand it, then, as soon as the national defense act permitted an increase to 91, they raised the number to 91, but in May we amended the act so that they could make the corps very much larger, but it has not been put about 91 until this time.

Lieut. BRETT. It is not above 91, substantially, now.

Mr. SHALLENBERGER. Although permission to make that increase was granted, through the passage of the act nine months ago, they have not filled the General Staff Corps up yet?

Lieut. BRETT. No.

The CHAIRMAN. The department did not ask in any deficiency estimate last year for any increase of the number?

Lieut. BRETT. No.

The CHAIRMAN. The next item is, "Additional pay for length of service, \$40,000."

Lieut. BRETT. Those are all based on the requirements of law.

The CHAIRMAN. The next item is, "Adjutant General's Department: For pay of two hundred and eighty-one officers, \$649,953."

Lieut. BRETT. That is based on a per capita, and they have now 152, and they want for the year 1919, a total of 1,783 officers, based on an army of 3,000,000 men.

The CHAIRMAN. That is based on an army of 3,000,000 men?

Lieut. BRETT. Yes, sir.

The CHAIRMAN. This estimate is based on an army of 3,000,000 men?

Lieut. BRETT. This estimate is based on an army of 1,612,245.

The CHAIRMAN. I thought you said this estimate was based on an army of 3,000,000 men.

Lieut. BRETT. No; I say they asked for 1,783 men for 1919, on the basis of 3,000,000 men.

The CHAIRMAN. What would be the amount for that number of men?

Lieut. BRETT. You mean for 1,783?

The CHAIRMAN. Yes.

Lieut. BRETT. It would be \$2,313 for each officer. For The Adjutant General's department that per capita is low, because they have not many officers in the lower grades. The per capita probably ought to be \$3,000 for The Adjutant General's office.

The CHAIRMAN. What is the lowest rank in The Adjutant General's office?

Lieut. BRETT. I think the lowest rank is major.

Mr. SHALLENBERGER. The act which we amended some time ago permits the appointment of officers as low as lieutenant?

Lieut. BRETT. Yes, sir.

Mr. SHALLENBERGER. Have there been any lieutenants appointed in The Adjutant General's department?

Lieut. BRETT. There have been some. I know there have been some appointed in connection with the Bureau of War-Risk Insurance, but whether there have been any appointed outside of that I do not know.

The CHAIRMAN. I believe you understand that in all of these items it is the sense of the committee that they would like to have you complete the record with a statement of the increase that would have to be made for every additional 500,000 men under each item.

Lieut. BRETT. I gave you the figures awhile ago—\$290,000,000—and if you add \$290,000,000 that will just include pay of 27,778 officers, which is the number of officers required for every 500,000 enlisted men, making a total of 527,778 officers and men.

Mr. FIELDS. You estimate that for an army of 3,000,000 men it will be necessary to raise this amount by \$290,000,000?

Lieut. BRETT. \$290,000,000 for every 500,000 enlisted men, and for the 500,000 men there would be required 27,778 officers, making 1 officer for every 18 men.

Mr. SHALLENBERGER. Then, we can simply add \$290,000,000 for the pay of each additional 500,000 that may be added?

Lieut. BRETT. Yes; that will cover every item of pay.

Mr. CALDWELL. It does not make any difference whether we divide it or not, because it is all one proposition?

Lieut. BRETT. Yes, sir.

Mr. FIELDS. That calculation would apply throughout the entire pay items?

Lieut. BRETT. Throughout the bill. It amounts to \$301,000,000 a year; about \$11,000,000 can be knocked off, because amongst the officers you will get there will be none who have had service, unless the enlisted men are commissioned. There will be no overhead charges such as commutation of quarters and mileage, and the amounts will not be in proportion to what they are here.

The CHAIRMAN. The next item is "Additional pay for length of service \$35,000." That is figured in the same way as the other similar items?

Lieut. BRETT. Yes, sir.

The CHAIRMAN. The next item is "Inspector General's Department: Pay of two hundred and forty-six officers, \$568,998."

Lieut. BRETT. They have 90 officers at the present time.

Mr. TILSON. Is that their pro rata share according to your plan?

Lieut. BRETT. That is their pro rata.

Mr. TILSON. Of an army of 1,612,245 men?

Lieut. BRETT. Yes.

The CHAIRMAN. Did they ask for any more than you have estimated for?

Lieut. BRETT. They asked for 296 officers for an army of 3,000,000 men.

The CHAIRMAN. You estimate for 246?

Lieut. BRETT. Yes, sir.

Mr. TILSON. That is a very small increase.

Lieut. BRETT. That is in accordance with their own reply, under date of December 1, in reply to a letter from the Quartermaster General dated November 30. [Reading:]

WAR DEPARTMENT,
OFFICE OF THE INSPECTOR GENERAL,
Washington, December 1, 1917.

From: The Inspector General of the Army.

To: The Quartermaster General.

Subject: Estimates, commissioned requirements of the Inspector General's Department, 1919.

1. In reply to letter from the Quartermaster General dated November 30, 1917 (111-1006-A-E), the following is submitted:

1. The number of officers now commissioned in the Inspector General's Department is 90.

2. The estimated commissioned requirements for the fiscal year 1919 are as shown in the attached tabulated statement, 296.

W. T. WOOD,
Acting Inspector General.

Estimate of the number of officers required in the Inspector General's Department during the year ending June 30, 1919.

	Major generals.	Briga- dier generals.	Colonels.	Lieuten- ant colonels.	Lieuten- ant colonels or majors.	Majors.	Total.
Inspector General's Office and Territorial Departments:							
Heads of department.....	1						1
Aviation.....			1				1
Cavalry.....		1					1
Field Artillery.....		1		1	2		4
Infantry.....		1					1
Cavalry, Infantry, or Field Artillery.....		1					1
Departments.....			5	8		16	29
1 Grand Army headquarters:							
Army inspector.....	1						1
Field Artillery.....		1					1
Aviation.....		1					1
Cavalry, Infantry, or Coast Artillery.....			3				3
3 field armies:							
Army inspector.....		3					3
Field Artillery.....		3		3			6
Aviation.....		3		3			6
Cavalry, Infantry, or Coast Artillery.....			3			6	9
15 army corps:							
Cavalry.....							
Field Artillery.....			15			15	30
Aviation.....			15			15	30
Cavalry, Infantry, or Coast Artillery.....			15			15	30
90 divisions: Cavalry, Infantry, Field Artillery, or Coast Ar- tillery.....					90		90
32 training areas: Cavalry, In- fantry, Field Artillery, or Coast Artillery.....						32	32
2 ports of embarkation: Cav- alry, Infantry, Field Artil- lery, or Coast Artillery.....			2			2	4
4 ports of debarkation: Cavalry, Infantry, Field Artillery, or Coast Artillery.....			4			8	12
Total.....	2	15	63	15	92	109	296

J. L. CHAMBERLAIN,
Inspector General.

To the QUARTERMASTER GENERAL.

WAR DEPARTMENT, OFFICE INSPECTOR GENERAL,
December 1, 1917.

They asked for 50 more than we carried in our estimates.

Mr. TILSON. Either you are pretty liberal in your figuring or they are extremely modest in increasing the number only 50 officers.

Lieut. BRETT. Perhaps we were too liberal in our distribution.

The CHAIRMAN. Do you think that number could be cut?

Lieut. BRETT. It is a lump-sum appropriation. Somebody else would have to suffer. I do not think that should be cut, because we just took 100,000 officers and distributed them in a purely arbitrary manner between the different bureaus. What each bureau gets depends upon what the Secretary of War and the Chief of Staff gives them.

The CHAIRMAN. The next item is, "Additional pay for length of service, \$23,000." Your explanation of that is the same as for other similar items?

Lieut. BRETT. Yes, sir.

The CHAIRMAN. The next item is, "Corps of Engineers: Pay of 400 officers, \$925,200."

Lieut. BRETT. Of course, that is taking into consideration the acts of recent years, making the Engineers a part of the line. There are some of the 400 officers who are on rivers-and-harbors work, and not serving with troops.

The CHAIRMAN. That includes all officers in the Engineer Corps?

Lieut. BRETT. No; not the 400. The Engineer Corps is now composed of 6,016 officers, and they want 6,550. You will find the rest of the Engineer officers are in the item including officers of the line. The enlisted men in the Engineer Corps are all in the line.

Mr. TILSON. How are these officers distinguished from the other officers of the Engineer Corps?

Lieut. BRETT. Just by their assignment. If they are assigned to duty with troops, they become a part of the line, and as soon as that assignment is changed they become really staff officers.

The CHAIRMAN. Why is there this increase in this item?

Mr. SHALLENBERGER. Is there a probability that there will be a larger number of Engineer officers used for the performance of civilian duties during the war, or is that an arbitrary figure?

Lieut. BRETT. This is purely an arbitrary figure. We have no means of knowing until after all the special and technical troops have been established how many of those become troops of the line and how many are staff troops. They are all a part of the 100,000 officers.

Mr. SHALLENBERGER. If an officer was not needed for the river-and-harbor work, he would simply go back to the line again?

Lieut. BRETT. Yes, sir.

The CHAIRMAN. The next item is, "Additional pay for length of service, \$110,000." You offer the same explanation of that as you have given for other similar items?

Lieut. BRETT. Yes, sir.

The CHAIRMAN. The next item is, "Ordnance Department: Pay of 2,000 officers, \$4,626,000." How many officers have they now?

Lieut. BRETT. They have 2,306.

The CHAIRMAN. They have 2,306?

Lieut. BRETT. Yes, sir; they had that number on the 20th of December.

Mr. TILSON. Then you will start out with a deficit?

Lieut. BRETT. No, sir; this is a lump-sum appropriation.

Mr. TILSON. We ought not to make that proposition misleading, as it seems to be in the Corps of Engineers and some others.

Lieut. BRETT. Not in the case of the Corps of Engineers, because you will find the rest of the officers appropriated for in the other part of the bill.

Mr. TILSON. It seems to me we are going out of the way to make that proposition misleading, and it does not seem to me there is any object in doing that.

Lieut. BRETT. You can increase the officers in the Ordnance Department to 2,500 and take the difference, 500, off the line. At the time we prepared the estimates they did not have that number—2,306—of officers. It is a simple matter to take 500 officers off the line.

Mr. TILSON. Is that a fair proposition, to take 500 officers off the line and put them in here? Is that about what it will be? I think people in looking over this bill will want to get at about how many officers there are who are going to receive pay.

Lieut. BRETT. They wanted 7,988.

Mr. TILSON. How many do you estimate they are going to have? You have estimated here for 2,000, and then you tell us they have 2,300, and that is six months before the bill goes into effect.

Lieut. BRETT. But this estimate was made long before they had 2,306 officers. We had no means of knowing what officers are to be provided for in the Ordnance Department.

Mr. TILSON. Do you not think we ought to try to bring it up to date?

Lieut. BRETT. We try to do that, and we can make the figure 3,000 and take them off the line.

Mr. TILSON. We can say that is approximately correct, but here we have the hearings with your statement in it.

Mr. CALDWELL. If we specify a less number of ordnance officers and appropriate for them, when the bill becomes a matter of public property on the floor of the House, the roar that goes up over the country because we have not supplied money enough for the ordnance officers will be pretty loud, and it will be something we will have a hard time answering.

Gen. SHARPE. You can take them off the list of officers in the Quartermaster Department.

Mr. TILSON. And take off a few from the Inspector General's Department.

Gen. SHARPE. You can take them off the Quartermaster Department.

Mr. TILSON. The Inspector General only asks 50 more for 3,000,000 men.

Gen. SHARPE. We are estimating for 8,300 officers, and we have 6,701 allowed us. You can take a thousand officers off the Quartermaster Department.

Mr. GREENE. I do not think we ought take any off, but we ought to know where we shall put them on.

Gen. SHARPE. We will need 18,027 officers, if we have an army of 3,000,000 men.

Mr. TILSON. We are figuring on an army of 1,600,000, and we are figuring so much for every additional 500,000. That is the plan we

are going on. If we figure on 1,600,000, and so much for every half million men thereafter, that will be some sort of a rational basis.

Gen. SHARPE. We can make these figures corresponding to what it is now.

Mr. TILSON. That is not what it may be to-morrow.

Gen. SHARPE. That is right.

Mr. TILSON. I think we had better have your best estimate of what it is going to be when this bill is in effect.

Lieut. BRETT. Then you ought to have 4,000 officers in the Ordnance Department, at least. They want 7,988 for 3,000,000 men, and for 1,612,245 they would want practically 4,000 officers.

Mr. QUIN. How many officers would you have for another 500,000 men?

Lieut. BRETT. You would want 27,778 officers for every half million men you had.

The CHAIRMAN. My recollection is that Gen. Crozier said he would need 5,000 officers.

Mr. TILSON. Is this your best estimate of the number of ordnance officers that that department ought to have out of the appropriation in the year 1919?

Lieut. BRETT. Gen. Crozier says he wants——

Mr. TILSON (interposing). I do not care how many he wants.

Lieut. BRETT. But taking the basis of his wants, they would amount to about 4,000 for 1919.

Mr. TILSON. Would you consider that a fair estimate of what should be our apportionment to the Ordnance Department?

Lieut. BRETT. In the light of the information we have to-day I should say 4,000 would be a fair estimate.

The CHAIRMAN. Then this estimate was made some time ago, and it ought to be increased?

Lieut. BRETT. Yes, sir. Here is a memorandum for the Quartermaster General from the Chief of Staff. That was on the 19th. On the 22d the question came up as to whether the million and a half men included the large number of men they wanted in the aviation section. We sent it to the Chief of Staff, and this is what he says, referring to the memorandum of October 19 (reading):

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF STAFF,
Washington, October 22, 1917.

Memorandum for the Quartermaster General:

Referring to the memorandum dated October 19, the number of men called for by the program of the Aviation Section, Signal Corps, in France, is 11,941 officers and 112,245 men. These should be in addition to the 1,500,000 men referred to in memorandum of October 19.

TASKER H. BLISS
General, Chief of Staff.

The memorandum of October 19 referred to above reads:

Memorandum for the Quartermaster General:

The Secretary of War desires that you submit a modified estimate based on the assumption of 1,500,000 men to be maintained in the Military Establishment during the fiscal year 1918-1919.

TASKER H. BLISS
General, Chief of Staff.

We can not go beyond that in our estimate. We may be certain that they are going to have more men, but we can not estimate for any more without some authority.

Mr. GREENE. The Quartermaster General is obliged to confine his distribution to the original estimate?

Lieut. BRETT. Yes, sir.

The following, submitted after the hearings, speaks for itself.

111-1006-A-F. A-E.]

JANUARY 23, 1918.

Memorandum for the Chief of Staff:

At the hearings before the House Committee on Military Affairs on the pay estimate for the fiscal year 1919 on January 7 and 8, 1918, the following colloquy took place:

"Mr. KAHN. Evidently, General, this estimate of yours begins with a deficiency, right now.

"Gen. SHARPE. Yes, sir.

"Mr. KAHN. What is going to be the policy of the bureau? Are you going to put in a supplemental estimate, so that this committee can pass upon it, or are you going to the Committee on Appropriations and ask for a deficiency?

"Gen. SHARPE. We would like to put in a supplemental estimate."

The estimate for the Quartermaster Corps for 1919, so far as the number of enlisted men to be provided for is concerned, was founded on the directions embodied in the two memoranda following:

"OCTOBER 19, 1917.

"Memorandum for the Quartermaster General:

"The Secretary of War desires that you submit a modified estimate based on the assumption of 1,500,000 men to be maintained in the Military Establishment during the fiscal year 1918-19.

"TASKER H. BLISS,
"General, Chief of Staff."

"OCTOBER 22, 1917.

"Memorandum for the Quartermaster General:

"Referring to the memorandum dated October 19, the number of men called for by the program of the Aviation Section, Signal Corps, in France, is 11,941 officers and 112,245 men. These should be in addition to the 1,800,000 men referred to in memorandum of October 19.

"TASKER H. BLISS.
"General, Chief of Staff."

These call for 1,612,245 enlisted men, and for this number this office provided 100,000 commissioned officers, which, appearing to the House Committee on Military Affairs to be too small, was increased to 126,000 officers during the progress of the hearings.

Authority is requested to submit a supplemental estimate for an increased number of enlisted men, and if granted information is desired as to the number for whom provision should be made.

GEO. W. GOETHALS,
Acting Quartermaster General.

The CHAIRMAN. The next item is, "Additional pay for length of service, \$70,000." Your explanation of that is the same as you have given for other similar items?

Lieut. BRETT. Yes, sir.

The CHAIRMAN. The next item is, "Quartermaster Corps: Pay of eight thousand three hundred officers, \$19,197,900." How many officers have you now?

Gen. SHARPE. Six thousand seven hundred and one officers are authorized.

Lieut. BRETT. We actually had on December 1st, 6,190.

Mr. TILSON. That seems to be a fair proportion.

Col. DALLAM. The number authorized by the War Department, 6,701, is rather small, because the figures on which the General Staff based their number of officers were based on the data we gave them a couple of months ago, but the number of units which have been added to the Quartermaster Corps have increased the number of officers, so that the number laid down there, of 8,300, comes close to what we can figure we will need for an army of 1,612,245 men. Not having that, I have taken what we actually had at that time, and what will be the actual number required with the divisions and with an Army corps, and what is actually required for each technical unit, and for other branches, and it comes very close to 8,300 men for an army of 1,612,245 men.

Mr. QUIN. We know they are going to draft another allotment of men on the 15th day of February.

Gen. SHARPE. That is the last part of the draft which has not been called.

Mr. TILSON. It seems to me this just about represents the facts, and then we have the other formula that if another half million is added, we can give them the right appropriation for the half million and increase it by that amount, and it seems to me we are in good shape on that particular item.

Col. DALLAM. We are in very good shape, unless we have a new unit added to the corps. In that case that adds that many additional officers. For example, there was authorized the other day 51 special men in the remount service. There were 33 auxiliary remount stations authorized, and each one of them carries a certain number of officers, and we can figure how many officers we need.

Mr. TILSON. With that exception this practically takes care of you!

Col. DALLAM. Practically so.

Mr. SHALLENBERGER. Is it not a fact that the British Government appropriates every three months for the expenses of this war?

Gen. SHARPE. I do not know about that.

Mr. SHALLENBERGER. We are trying to appropriate a year and a half ahead in the biggest war in the world, and I think it is impossible that we can get close to what we need, and I think the public should understand that, so that if we have that in mind, it will perhaps make it easier for us to explain the situation. I am sure the English Government appropriates oftener than we do, and I think we will be forced to do that in order to get at an intelligent estimate of what we ought to have.

Col. DALLAM. The estimates can be made out in a much better way.

The CHAIRMAN. Can you not revise these estimates on these particular items by to-morrow or the next day in order to give us better information in reference to the Inspector General's Department and the Ordnance Department?

Lieut. BRETT. We will try to do that by to-morrow.

The CHAIRMAN. The next item is, "Medical Department: Pay of fourteen thousand officers, \$32,382,000."

Mr. TILSON. How many of those officers have actually been called into the service?

Lieut. BRETT. They have commissioned 24,060. We do not know how many they have called.

Mr. TILSON. Officers who are not commissioned do not receive pay; only those who are called?

Lieut. BRETT. Yes, sir.

Mr. SHALLENBERGER. I understood you to say 24,060 officers were commissioned in the Medical Corps. You do not know how many are called and you only estimate for 14,000.

Lieut. BRETT. The 14,000 we estimate for includes the medical officers, the dental officers, the veterinarians, the sanitary officers, the men in the ambulance service, etc.

Mr. SHALLENBERGER. You do not know how many men are actually in the service?

Lieut. BRETT. No, sir.

Mr. SHALLENBERGER. Do you know whether or not there are a great many more men commissioned in proportion to the number called in that particular corps than in the other corps?

Lieut. BRETT. I could not tell you that. Ordinarily, in peace times, the Medical Department has a large number of reserve officers commissioned.

Mr. SHALLENBERGER. That would not necessarily mean that we have 24,000 officers actually in the service, or anything like that?

Mr. OLNEY. Have there not been commissioned enough men in the Medical Corps for an army of 3,000,000 men?

Lieut. BRETT. Yes.

Gen. GOETHALS. The Medical Corps units have been organized and sent over in advance of our own Army.

Mr. SHALLENBERGER. Are they being paid by us?

Gen. GOETHALS. They are being paid by us.

Mr. CALDWELL. Does that include those who went over in the Red Cross units?

Lieut. BRETT. If they are commissioned in the Army.

Gen. GOETHALS. It is the Red Cross units I had reference to.

Mr. TILSON. We all know that they have commissioned a number of medical officers who have not been called into the service.

Mr. FIELDS. There are a very large number commissioned in the Dental Corps.

Lieut. BRETT. In the Dental Corps and the Reserve Dental Corps. They have in the Dental Corps 178, but they have in the Reserve Dental Corps 4,390, and in the Dental Corps of the National Guard 229. They are all carried as a part of the Medical Corps.

Mr. FIELDS. They have a Dental Corps that will supply an army of what size?

Lieut. BRETT. An army of 3,000,000 men.

Mr. GREENE. I think it will be found that a great many of the Dental Corps men are in the cantonments now, and there are perhaps more men at work now under normal conditions than are enough to take care of the Army when it gets under way. I have been informed that there are a great many men among the recruits whose only trouble is their defective teeth, and those teeth are being fixed up so that the men can be ready to go.

Mr. CALDWELL. In addition to that, there are a number of free organizations who are doing work in the Dental Corps. I understood there was some trouble about the supply of material going into the teeth.

Lieut. BRETT. Let me call your attention to the difficulty that is going to arise in revising this estimate for the pay of officers.

There are in the service at the present time, commissioned, 121,089 officers, and we have actually in service on December 31 for the Regular Army and National Guard and on November 30 for the Reserve Officers and the National Army 110,939.

When you come to correct the figures for the Inspector General's Department and the Ordnance Department and for the Medical Department, what would you have us do with the 11,000 surplus?

Mr. TILSON. They are not in the service, are they?

Lieut. BRETT. Yes, sir.

Mr. TILSON. Then you have made a mistake somewhere.

Lieut. BRETT. No, sir; we are limited on our number of officers, as we are on the enlisted men. Eleven thousand men would be about taken up by the 200,000 additional men. We have 200,000 additional men to come in, but the Secretary of War says estimate for 1,612,245. But they do not stop bringing the men in, and they do not stop bringing in the officers.

Mr. TILSON. Then you tell us you are asking for pay for 100,000 officers although there are at the present time 111,000 officers.

Mr. SHALLENBERGER. You say there have been commissioned 121,000 officers?

Lieut. BRETT. There have been 121,089 officers commissioned.

Mr. SHALLENBERGER. A lot of them have not been called into the service yet.

Mr. TILSON. But there are 11,000 who have to be paid.

Mr. QUIN. What would be the average pay of the 11,000 surplus?

Lieut. BRETT. \$2,313 apiece per year.

Mr. QUIN. We would have to add that to this bill?

Lieut. BRETT. It looks that way; but they are still taking in officers. They are not going to stop.

Mr. QUIN. But you have prorated that on each additional 500,000 men?

Lieut. BRETT. If you put in the \$290,000,000 for every additional 500,000 men we can take care of them.

The CHAIRMAN. You can take care of 1,612,245?

Lieut. BRETT. If you give us \$290,000,000 for every additional 500,000 enlisted men, in addition to the 1,612,245, we could take care of the officers without any trouble, because the officers will not be increased. They will put in no additional officers until they have absorbed these 11,000. There are 27,778 officers for each 500,000 men.

Mr. TILSON. Then your estimate of \$290,000,000 for the first 500,000 is too much, by your own statement, because you say you can take care of the 11,000 officers out of the appropriation you are asking for.

Lieut. BRETT. Because they are a part of it.

Capt. DALY. We have not estimated for the 11,000 extra.

Mr. TILSON. You have not estimated for them?

Capt. DALY. Only for 100,000.

Mr. TILSON. I thought this \$290,000,000 was for pay of officers also.

Capt. DALY. Yes, sir; it is, but in our estimate for 100,000 officers and 1,612,245 men no provision is made for the 11,000 officers in excess.

Mr. GREENE. But you do bring into actual existence some officers not included in anybody's estimate?

Capt. DALY. We have 11,000 officers over, and we require 27,718 for every additional 500,000 men, and we will bring in that many more and add to the 11,000 the special officers for 500,000.

Lieut. BRETT. We can just write the Secretary a letter, calling attention to the fact that if they exceed a certain number there is going to be a deficiency, and stop right there, and it is then up to the Secretary of War to determine whether he desires to create a deficiency.

Mr. HARRISON. Do you not have to provide officers in advance of calling the men in?

Lieut. BRETT. Always.

Mr. HARRISON. Then the 11,000 officers are provided in advance of calling in the extra 500,000 men?

Mr. OLNEY. In the Dental Reserve Corps, although you may commission a dentist you are not going to call him into the service until he is needed, and his pay starts in then?

Lieut. BRETT. His pay does not start until he is called in.

Mr. HARRISON. Then the Secretary of War is simply providing 11,000 men for the expected increase?

Mr. TILSON. But he is not providing the pay. He has forbidden that, and they have not provided for it in their estimates.

Gen. GOETHALS. I do not think that is altogether a fair statement. The statement is that the Quartermaster General has submitted an estimate for so many enlisted men and so many officers, and, as a matter of fact, we have 11,000 officers, and those officers are in the service and have got to be paid, and I do not think that the Secretary of War has limited it to 100,000. It is our duty to put in the 11,000 men.

Mr. TILSON. That is what we are trying to get him to do.

Gen. GOETHALS. That is what he ought to do.

Mr. TILSON. He says he is forbidden to do that.

Lieut. BRETT. The Secretary of War did not fix the number of officers; that is fixed according to the number of men.

(Thereupon, at 10.15 o'clock p. m., the committee adjourned to meet tomorrow, Tuesday, January 8, 1918, at 10.30 o'clock a. m.)

HOUSE OF REPRESENTATIVES,
COMMITTEE ON MILITARY AFFAIRS,
Tuesday, January 8, 1918.

The committee this day met, Hon. S. Hubert Dent (chairman) presiding.

STATEMENTS OF MAJ. GEN. HENRY C. SHARPE, QUARTERMASTER GENERAL, AND MAJ. GEN. GEORGE W. GOETHALS, ACTING QUARTERMASTER GENERAL, ACCOMPANIED BY COL. S. M. DALLAM, MAJ. EZRA DAVIS, CAPT. CHARLES P. DALY, AND LIEUT. J. Q. A. BRETT, QUARTERMASTER CORPS.

The CHAIRMAN. Last night we finished the general discussion in reference to officers of the various corps; and as I understand it, Lieut. Brett has rearranged and redrafted those provisions. You can give that to the committee now the way it has been redrafted.

Lieut. BRETT. It will be understood that this estimate was made in October, and at that time a great many of the technical and special units had not been formed, and we did not have a great amount of data on which to found an estimate as to the officers. But the reports which have come in—and the latest one came in last Saturday—indicate that 121,089 officers have been appointed, and they are actually in the service. A great many of these are covered by a report of November 30, and since that time there have been a great many coming in. Take the report of December 31 for the National Army and the National Guard and of November 30 for the National Army Reserve; that shows there are actually in the service 110,939. There have been commissioned 121,089. For that reason I have recast the estimate for officers and made the number 126,000. After I have made this preliminary statement, if it meets with the approval of the committee, I will indicate the changes which have been made.

The 126,000 officers are divided as follows: The officers of the line I have increased from 62,000 to 78,323. They have in the line, according to the figures furnished on Saturday, 77,795. That only gives about 600 more than are already in the service. The amount of this item should now read \$180,698,499.

Mr. SHALLENBERGER. I would like you to give the number of officers actually in the Regular Army and the National Guard.

Lieut. BRETT. The number of officers in the Regular Army on December 31, 1917, was 11,948 and in the National Guard 16,150.

Mr. SHALLENBERGER. Would those men all be line officers?

Lieut. BRETT. With very few exceptions they will be line officers.

Mr. SHALLENBERGER. All the rest of the line officers would be in the National Army—all the rest of the 77,795? Taking away the officers in the Regular Army and the National Guard, and that would leave those who are in the National Army?

Lieut. BRETT. Yes, sir; they did not call in the officers of the Staff Corps of the National Guard, except in a few cases, where they called them individually, as I understand it; but they did not come in in the draft.

Mr. SHALLENBERGER. How is it that there are twice as many line officers in the National Army as there are in the National Guard and the Regular Army when that branch of the service does not have as many troops?

Lieut. BRETT. That is because of the special and technical troops.

Mr. SHALLENBERGER. You said line officers.

Lieut. BRETT. 11,948 are all the officers in the Regular Army. In the National Guard, too, they are nearly all line officers.

Mr. SHALLENBERGER. You say there are a total of 77,795 line officers, and the total of the line officers in the Regular Army and the National Guard only amounts to about 28,000. You say the rest of the line officers are in the National Army. How does it happen that you have so many line officers in the National Army?

Lieut. BRETT. All of the officers in the National Army, apart from the technical and special troops, are line officers.

Mr. SHALLENBERGER. Then there must be a lot of line officers there who are not serving with any troops, but who are waiting for service with troops.

Lieut. BRETT. I suppose there are a good many there in anticipation of the arrival of the 200,000 men in the National Army.

Mr. SHALLENBERGER. Would it be a fair estimate to say that 16,000 would be actual number in the National Army?

Lieut. BRETT. There are 480,000 men in the National Army, and there will be 656,000.

Mr. SHALLENBERGER. But they are not really serving in the National Army; they are not serving with troops that do not exist. They must be waiting.

Lieut. BRETT. They are waiting. They have to be brought in in advance of the troops, so that when the troops arrive they will have officers to care for them.

Mr. McKENZIE. In this National Army, are not the units all organized and formed, and necessarily officered—that is, the organizations of the 656,000 men—and is it not true that this additional increment of 34 per cent that is waiting to be called in will simply go in and fill up the organizations, but the organizations are already completely officered?

Lieut. BRETT. They are being organized. The men come in as individuals, and they are being formed into organizations and the organizations are being officered just as they are in the Regular Army.

Mr. McKENZIE. But you do not catch my point. If I understand Gov. Shallenberger's inquiry, he is endeavoring to find out whether or not a good many of these officers in the National Army are not simply sitting around in hotels, or other places, waiting to be called into the service. My understanding is that all of the units of the National Army are formed, and necessarily must be officered, and the fact that a few of the men have not been called in would not in any way affect the organizations, so far as the officers are concerned, and as I understand it, these 16,000 officers—or whatever the number may be—are all in the service. What do you know about that?

Lieut. BRETT. The selective draft act provides, of course, that the organizations now that are provided for in the Cavalry, the Field Artillery, and the Infantry will be organized under the provisions of the national defense act, and they will have the same officers. But section 2 provides for the special and technical troops. Those troops have a great many officers, and as Maj. Davis stated last night, all of the special and technical troops for the Quartermaster Corps are formed along the line of the Infantry organization. There is a regimental organization, and they have their officers in the same proportion, or about the same proportion as the Infantry. The other branches are not formed into regiments, such as the bakery companies.

Mr. McKENZIE. I do not think you understand yet what I am trying to get at. For instance, take the situation at Camp Grant, which is designated as a certain division of the Army. There is at that camp the Three hundred and forty-second Regiment that takes in the men from my congressional district. That regiment, of course, is organized, the companies are all organized, they are all officered, and the fact that there are 200,000 in the National Army who have

They asked for 50 more than we carried in our estimates.

Mr. TILSON. Either you are pretty liberal in your figuring or they are extremely modest in increasing the number only 50 officers.

Lieut. BRETT. Perhaps we were too liberal in our distribution.

The CHAIRMAN. Do you think that number could be cut?

Lieut. BRETT. It is a lump-sum appropriation. Somebody else would have to suffer. I do not think that should be cut, because we just took 100,000 officers and distributed them in a purely arbitrary manner between the different bureaus. What each bureau gets depends upon what the Secretary of War and the Chief of Staff gives them.

The CHAIRMAN. The next item is, "Additional pay for length of service, \$23,000." Your explanation of that is the same as for other similar items?

Lieut. BRETT. Yes, sir.

The CHAIRMAN. The next item is, "Corps of Engineers: Pay of 400 officers, \$925,200."

Lieut. BRETT. Of course, that is taking into consideration the acts of recent years, making the Engineers a part of the line. There are some of the 400 officers who are on rivers-and-harbors work, and not serving with troops.

The CHAIRMAN. That includes all officers in the Engineer Corps?

Lieut. BRETT. No; not the 400. The Engineer Corps is now composed of 6,016 officers, and they want 6,550. You will find the rest of the Engineer officers are in the item including officers of the line. The enlisted men in the Engineer Corps are all in the line.

Mr. TILSON. How are these officers distinguished from the other officers of the Engineer Corps?

Lieut. BRETT. Just by their assignment. If they are assigned to duty with troops, they become a part of the line, and as soon as that assignment is changed they become really staff officers.

The CHAIRMAN. Why is there this increase in this item?

Mr. SHALLENBERGER. Is there a probability that there will be a larger number of Engineer officers used for the performance of civilian duties during the war, or is that an arbitrary figure?

Lieut. BRETT. This is purely an arbitrary figure. We have no means of knowing until after all the special and technical troops have been established how many of those become troops of the line and how many are staff troops. They are all a part of the 100,000 officers.

Mr. SHALLENBERGER. If an officer was not needed for the river-and-harbor work, he would simply go back to the line again?

Lieut. BRETT. Yes, sir.

The CHAIRMAN. The next item is, "Additional pay for length of service, \$110,000." You offer the same explanation of that as you have given for other similar items?

Lieut. BRETT. Yes, sir.

The CHAIRMAN. The next item is, "Ordnance Department: Pay of 2,000 officers, \$4,626,000." How many officers have they now?

Lieut. BRETT. They have 2,306.

The CHAIRMAN. They have 2,306?

Lieut. BRETT. Yes, sir; they had that number on the 20th of December.

Mr. TILSON. Then you will start out with a deficit?

Lieut. BRETT. No, sir; this is a lump-sum appropriation.

Mr. TILSON. We ought not to make that proposition misleading, as it seems to be in the Corps of Engineers and some others.

Lieut. BRETT. Not in the case of the Corps of Engineers, because you will find the rest of the officers appropriated for in the other part of the bill.

Mr. TILSON. It seems to me we are going out of the way to make that proposition misleading, and it does not seem to me there is any object in doing that.

Lieut. BRETT. You can increase the officers in the Ordnance Department to 2,500 and take the difference, 500, off the line. At the time we prepared the estimates they did not have that number—2,306—of officers. It is a simple matter to take 500 officers off the line.

Mr. TILSON. Is that a fair proposition, to take 500 officers off the line and put them in here? Is that about what it will be? I think people in looking over this bill will want to get at about how many officers there are who are going to receive pay.

Lieut. BRETT. They wanted 7,988.

Mr. TILSON. How many do you estimate they are going to have? You have estimated here for 2,000, and then you tell us they have 2,300, and that is six months before the bill goes into effect.

Lieut. BRETT. But this estimate was made long before they had 2,306 officers. We had no means of knowing what officers are to be provided for in the Ordnance Department.

Mr. TILSON. Do you not think we ought to try to bring it up to date?

Lieut. BRETT. We try to do that, and we can make the figure 3,000 and take them off the line.

Mr. TILSON. We can say that is approximately correct, but here we have the hearings with your statement in it.

Mr. CALDWELL. If we specify a less number of ordnance officers and appropriate for them, when the bill becomes a matter of public property on the floor of the House, the roar that goes up over the country because we have not supplied money enough for the ordnance officers will be pretty loud, and it will be something we will have a hard time answering.

Gen. SHARPE. You can take them off the list of officers in the Quartermaster Department.

Mr. TILSON. And take off a few from the Inspector General's Department.

Gen. SHARPE. You can take them off the Quartermaster Department.

Mr. TILSON. The Inspector General only asks 50 more for 3,000,000 men.

Gen. SHARPE. We are estimating for 8,300 officers, and we have 6,701 allowed us. You can take a thousand officers off the Quartermaster Department.

Mr. GREENE. I do not think we ought take any off, but we ought to know where we shall put them on.

Gen. SHARPE. We will need 18,027 officers, if we have an army of 3,000,000 men.

Mr. TILSON. We are figuring on an army of 1,600,000, and we are figuring so much for every additional 500,000. That is the plan we

are going on. If we figure on 1,600,000, and so much for every half million men thereafter, that will be some sort of a rational basis.

Gen. SHARPE. We can make these figures corresponding to what it is now.

Mr. TILSON. That is not what it may be to-morrow.

Gen. SHARPE. That is right.

Mr. TILSON. I think we had better have your best estimate of what it is going to be when this bill is in effect.

Lieut. BRETT. Then you ought to have 4,000 officers in the Ordnance Department, at least. They want 7,988 for 3,000,000 men, and for 1,612,245 they would want practically 4,000 officers.

Mr. QUIN. How many officers would you have for another 500,000 men?

Lieut. BRETT. You would want 27,778 officers for every half million men you had.

The CHAIRMAN. My recollection is that Gen. Crozier said he would need 5,000 officers.

Mr. TILSON. Is this your best estimate of the number of ordnance officers that that department ought to have out of the appropriation in the year 1919?

Lieut. BRETT. Gen. Crozier says he wants——

Mr. TILSON (interposing). I do not care how many he wants.

Lieut. BRETT. But taking the basis of his wants, they would amount to about 4,000 for 1919.

Mr. TILSON. Would you consider that a fair estimate of what should be our apportionment to the Ordnance Department?

Lieut. BRETT. In the light of the information we have to-day I should say 4,000 would be a fair estimate.

The CHAIRMAN. Then this estimate was made some time ago, and it ought to be increased?

Lieut. BRETT. Yes, sir. Here is a memorandum for the Quartermaster General from the Chief of Staff. That was on the 19th. On the 22d the question came up as to whether the million and a half men included the large number of men they wanted in the aviation section. We sent it to the Chief of Staff, and this is what he says, referring to the memorandum of October 19 (reading):

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF STAFF,
Washington, October 22, 1917.

Memorandum for the Quartermaster General:

Referring to the memorandum dated October 19, the number of men called for by the program of the Aviation Section, Signal Corps, in France, is 11,941 officers and 112,245 men. These should be in addition to the 1,500,000 men referred to in memorandum of October 19.

TASKER H. BLISS
General, Chief of Staff.

The memorandum of October 19 referred to above reads:

Memorandum for the Quartermaster General:

The Secretary of War desires that you submit a modified estimate based on the assumption of 1,500,000 men to be maintained in the Military Establishment during the fiscal year 1918-1919.

TASKER H. BLISS
General, Chief of Staff.

We can not go beyond that in our estimate. We may be certain that they are going to have more men, but we can not estimate for any more without some authority.

Mr. GREENE. The Quartermaster General is obliged to confine his distribution to the original estimate?

Lieut. BRETT. Yes, sir.

The following, submitted after the hearings, speaks for itself.

111-1006-A-F. A-E.]

JANUARY 23, 1918.

Memorandum for the Chief of Staff:

At the hearings before the House Committee on Military Affairs on the pay estimate for the fiscal year 1919 on January 7 and 8, 1918, the following colloquy took place:

"Mr. KAHN. Evidently, General, this estimate of yours begins with a deficiency, right now.

"Gen. SHARPE. Yes, sir.

"Mr. KAHN. What is going to be the policy of the bureau? Are you going to put in a supplemental estimate, so that this committee can pass upon it, or are you going to the Committee on Appropriations and ask for a deficiency?

"Gen. SHARPE. We would like to put in a supplemental estimate."

The estimate for the Quartermaster Corps for 1919, so far as the number of enlisted men to be provided for is concerned, was founded on the directions embodied in the two memoranda following:

"OCTOBER 19, 1917.

"Memorandum for the Quartermaster General:

"The Secretary of War desires that you submit a modified estimate based on the assumption of 1,500,000 men to be maintained in the Military Establishment during the fiscal year 1918-19.

"TASKER H. BLISS,

"General, Chief of Staff."

"OCTOBER 22, 1917.

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Authority is requested to submit a supplemental estimate for an increased number of enlisted men, and if granted information is desired as to the number for whom provision should be made.

GEO. W. GOETHALS,

Acting Quartermaster General.

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Mr. TILSON. That seems to be a fair proportion.

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Mr. QUIN. We know they are going to draft another allotment of men on the 15th day of February.

Gen. SHARPE. That is the last part of the draft which has not been called.

Mr. TILSON. It seems to me this just about represents the facts, and then we have the other formula that if another half million is added, we can give them the right appropriation for the half million and increase it by that amount, and it seems to me we are in good shape on that particular item.

Col. DALLAM. We are in very good shape, unless we have a new unit added to the corps. In that case that adds that many additional officers. For example, there was authorized the other day 51 special men in the remount service. There were 33 auxiliary remount stations authorized, and each one of them carries a certain number of officers, and we can figure how many officers we need.

Mr. TILSON. With that exception this practically takes care of you?

Col. DALLAM. Practically so.

Mr. SHALLENBERGER. Is it not a fact that the British Government appropriates every three months for the expenses of this war?

Gen. SHARPE. I do not know about that.

Mr. SHALLENBERGER. We are trying to appropriate a year and a half ahead in the biggest war in the world, and I think it is impossible that we can get close to what we need, and I think the public should understand that, so that if we have that in mind, it will perhaps make it easier for us to explain the situation. I am sure the English Government appropriates oftener than we do, and I think we will be forced to do that in order to get at an intelligent estimate of what we ought to have.

Col. DALLAM. The estimates can be made out in a much better way.

The CHAIRMAN. Can you not revise these estimates on these particular items by to-morrow or the next day in order to give us better information in reference to the Inspector General's Department and the Ordnance Department?

Lieut. BRETT. We will try to do that by to-morrow.

The CHAIRMAN. The next item is, "Medical Department: Pay of fourteen thousand officers, \$32,382,000."

Mr. TILSON. How many of those officers have actually been called into the service?

Lieut. BRETT. They have commissioned 24,060. We do not know how many they have called.

Mr. TILSON. Officers who are not commissioned do not receive pay; only those who are called?

Lieut. BRETT. Yes, sir.

Mr. SHALLENBERGER. I understood you to say 24,060 officers were commissioned in the Medical Corps. You do not know how many are called and you only estimate for 14,000.

Lieut. BRETT. The 14,000 we estimate for includes the medical officers, the dental officers, the veterinarians, the sanitary officers, the men in the ambulance service, etc.

Mr. SHALLENBERGER. You do not know how many men are actually in the service?

Lieut. BRETT. No, sir.

Mr. SHALLENBERGER. Do you know whether or not there are a great many more men commissioned in proportion to the number called in that particular corps than in the other corps?

Lieut. BRETT. I could not tell you that. Ordinarily, in peace times, the Medical Department has a large number of reserve officers commissioned.

Mr. SHALLENBERGER. That would not necessarily mean that we have 24,000 officers actually in the service, or anything like that?

Mr. OLNEY. Have there not been commissioned enough men in the Medical Corps for an army of 3,000,000 men?

Lieut. BRETT. Yes.

Gen. GOETHALS. The Medical Corps units have been organized and sent over in advance of our own Army.

Mr. SHALLENBERGER. Are they being paid by us?

Gen. GOETHALS. They are being paid by us.

Mr. CALDWELL. Does that include those who went over in the Red Cross units?

Lieut. BRETT. If they are commissioned in the Army.

Gen. GOETHALS. It is the Red Cross units I had reference to.

Mr. TILSON. We all know that they have commissioned a number of medical officers who have not been called into the service.

Mr. FIELDS. There are a very large number commissioned in the Dental Corps.

Lieut. BRETT. In the Dental Corps and the Reserve Dental Corps. They have in the Dental Corps 178, but they have in the Reserve Dental Corps 4,390, and in the Dental Corps of the National Guard 229. They are all carried as a part of the Medical Corps.

Mr. FIELDS. They have a Dental Corps that will supply an army of what size?

Lieut. BRETT. An army of 3,000,000 men.

Mr. GREENE. I think it will be found that a great many of the Dental Corps men are in the cantonments now, and there are perhaps more men at work now under normal conditions than are enough to take care of the Army when it gets under way. I have been informed that there are a great many men among the recruits whose only trouble is their defective teeth, and those teeth are being fixed up so that the men can be ready to go.

Mr. CALDWELL. In addition to that, there are a number of free organizations who are doing work in the Dental Corps. I understood there was some trouble about the supply of material going into the teeth.

Lieut. BRETT. Let me call your attention to the difficulty that is going to arise in revising this estimate for the pay of officers.

There are in the service at the present time, commissioned, 121,089 officers, and we have actually in service on December 31 for the Regular Army and National Guard and on November 30 for the Reserve Officers and the National Army 110,939.

When you come to correct the figures for the Inspector General's Department and the Ordnance Department and for the Medical Department, what would you have us do with the 11,000 surplus?

Mr. TILSON. They are not in the service, are they?

Lieut. BRETT. Yes, sir.

Mr. TILSON. Then you have made a mistake somewhere.

Lieut. BRETT. No, sir; we are limited on our number of officers, as we are on the enlisted men. Eleven thousand men would be about taken up by the 200,000 additional men. We have 200,000 additional men to come in, but the Secretary of War says estimate for 1,612,245. But they do not stop bringing the men in, and they do not stop bringing in the officers.

Mr. TILSON. Then you tell us you are asking for pay for 100,000 officers although there are at the present time 111,000 officers.

Mr. SHALLENBERGER. You say there have been commissioned 121,000 officers?

Lieut. BRETT. There have been 121,089 officers commissioned.

Mr. SHALLENBERGER. A lot of them have not been called into the service yet.

Mr. TILSON. But there are 11,000 who have to be paid.

Mr. QUIN. What would be the average pay of the 11,000 surplus?

Lieut. BRETT. \$2,313 apiece per year.

Mr. QUIN. We would have to add that to this bill?

Lieut. BRETT. It looks that way; but they are still taking in officers. They are not going to stop.

Mr. QUIN. But you have prorated that on each additional 500,000 men?

Lieut. BRETT. If you put in the \$290,000,000 for every additional 500,000 men we can take care of them.

The CHAIRMAN. You can take care of 1,612,245?

Lieut. BRETT. If you give us \$290,000,000 for every additional 500,000 enlisted men, in addition to the 1,612,245, we could take care of the officers without any trouble, because the officers will not be increased. They will put in no additional officers until they have absorbed these 11,000. There are 27,778 officers for each 500,000 men.

Mr. TILSON. Then your estimate of \$290,000,000 for the first 500,000 is too much, by your own statement, because you say you can take care of the 11,000 officers out of the appropriation you are asking for.

Lieut. BRETT. Because they are a part of it.

Capt. DALY. We have not estimated for the 11,000 extra.

Mr. TILSON. You have not estimated for them?

Capt. DALY. Only for 100,000.

Mr. TILSON. I thought this \$290,000,000 was for pay of officers, also.

Capt. DALY. Yes, sir; it is, but in our estimate for 100,000 officers and 1,612,245 men no provision is made for the 11,000 officers in excess.

Mr. GREENE. But you do bring into actual existence some officers not included in anybody's estimate?

Capt. DALY. We have 11,000 officers over, and we require 27,718 for every additional 500,000 men, and we will bring in that many more and add to the 11,000 the special officers for 500,000.

Lieut. BRETT. We can just write the Secretary a letter, calling attention to the fact that if they exceed a certain number there is going to be a deficiency, and stop right there, and it is then up to the Secretary of War to determine whether he desires to create a deficiency.

Mr. HARRISON. Do you not have to provide officers in advance of calling the men in?

Lieut. BRETT. Always.

Mr. HARRISON. Then the 11,000 officers are provided in advance of calling in the extra 500,000 men?

Mr. OLNEY. In the Dental Reserve Corps, although you may commission a dentist you are not going to call him into the service until he is needed, and his pay starts in then?

Lieut. BRETT. His pay does not start until he is called in.

Mr. HARRISON. Then the Secretary of War is simply providing 11,000 men for the expected increase?

Mr. TILSON. But he is not providing the pay. He has forbidden that, and they have not provided for it in their estimates.

Gen. GOETHALS. I do not think that is altogether a fair statement. The statement is that the Quartermaster General has submitted an estimate for so many enlisted men and so many officers, and, as a matter of fact, we have 11,000 officers, and those officers are in the service and have got to be paid, and I do not think that the Secretary of War has limited it to 100,000. It is our duty to put in the 11,000 men.

Mr. TILSON. That is what we are trying to get him to do.

Gen. GOETHALS. That is what he ought to do.

Mr. TILSON. He says he is forbidden to do that.

Lieut. BRETT. The Secretary of War did not fix the number of officers; that is fixed according to the number of men.

(Thereupon, at 10.15 o'clock p. m., the committee adjourned to meet tomorrow, Tuesday, January 8, 1918, at 10.30 o'clock a. m.)

HOUSE OF REPRESENTATIVES,
COMMITTEE ON MILITARY AFFAIRS,
Tuesday, January 8, 1918.

The committee this day met, Hon. S. Hubert Dent (chairman) presiding.

STATEMENTS OF MAJ. GEN. HENRY C. SHARPE, QUARTERMASTER GENERAL, AND MAJ. GEN. GEORGE W. GOETHALS, ACTING QUARTERMASTER GENERAL, ACCOMPANIED BY COL. S. M. DALLAM, MAJ. EZRA DAVIS, CAPT. CHARLES P. DALY, AND LIEUT. J. Q. A. BRETT, QUARTERMASTER CORPS.

The CHAIRMAN. Last night we finished the general discussion in reference to officers of the various corps; and as I understand it, Lieut. Brett has rearranged and redrafted those provisions. You can give that to the committee now the way it has been redrafted.

Lieut. BRETT. It will be understood that this estimate was made in October, and at that time a great many of the technical and special units had not been formed, and we did not have a great amount of data on which to found an estimate as to the officers. But the reports which have come in—and the latest one came in last Saturday—indicate that 121,089 officers have been appointed, and they are actually in the service. A great many of these are covered by a report of November 30, and since that time there have been a great many coming in. Take the report of December 31 for the National Army and the National Guard and of November 30 for the National Army Reserve; that shows there are actually in the service 110,939. There have been commissioned 121,089. For that reason I have recast the estimate for officers and made the number 126,000. After I have made this preliminary statement, if it meets with the approval of the committee, I will indicate the changes which have been made.

The 126,000 officers are divided as follows: The officers of the line I have increased from 62,000 to 78,323. They have in the line, according to the figures furnished on Saturday, 77,795. That only gives about 600 more than are already in the service. The amount of this item should now read \$180,698,499.

Mr. SHALLENBERGER. I would like you to give the number of officers actually in the Regular Army and the National Guard.

Lieut. BRETT. The number of officers in the Regular Army on December 31, 1917, was 11,948 and in the National Guard 16,150.

Mr. SHALLENBERGER. Would those men all be line officers?

Lieut. BRETT. With very few exceptions they will be line officers.

Mr. SHALLENBERGER. All the rest of the line officers would be in the National Army—all the rest of the 77,795? Taking away the officers in the Regular Army and the National Guard, and that would leave those who are in the National Army?

Lieut. BRETT. Yes, sir; they did not call in the officers of the Staff Corps of the National Guard, except in a few cases, where they called them individually, as I understand it; but they did not come in in the draft.

Mr. SHALLENBERGER. How is it that there are twice as many line officers in the National Army as there are in the National Guard and the Regular Army when that branch of the service does not have as many troops?

Lieut. BRETT. That is because of the special and technical troops.

Mr. SHALLENBERGER. You said line officers.

Lieut. BRETT. 11,948 are all the officers in the Regular Army. In the National Guard, too, they are nearly all line officers.

Mr. SHALLENBERGER. You say there are a total of 77,795 line officers, and the total of the line officers in the Regular Army and the National Guard only amounts to about 28,000. You say the rest of the line officers are in the National Army. How does it happen that you have so many line officers in the National Army?

Lieut. BRETT. All of the officers in the National Army, apart from the technical and special troops, are line officers.

Mr. SHALLENBERGER. Then there must be a lot of line officers there who are not serving with any troops, but who are waiting for service with troops.

Lieut. BRETT. I suppose there are a good many there in anticipation of the arrival of the 200,000 men in the National Army.

Mr. SHALLENBERGER. Would it be a fair estimate to say that 16,000 would be actual number in the National Army?

Lieut. BRETT. There are 480,000 men in the National Army, and there will be 656,000.

Mr. SHALLENBERGER. But they are not really serving in the National Army; they are not serving with troops that do not exist. They must be waiting.

Lieut. BRETT. They are waiting. They have to be brought in in advance of the troops, so that when the troops arrive they will have officers to care for them.

Mr. McKENZIE. In this National Army, are not the units all organized and formed, and necessarily officered—that is, the organizations of the 656,000 men—and is it not true that this additional increment of 34 per cent that is waiting to be called in will simply go in and fill up the organizations, but the organizations are already completely officered?

Lieut. BRETT. They are being organized. The men come in as individuals, and they are being formed into organizations and the organizations are being officered just as they are in the Regular Army.

Mr. McKENZIE. But you do not catch my point. If I understand Gov. Shallenberger's inquiry, he is endeavoring to find out whether or not a good many of these officers in the National Army are not simply sitting around in hotels, or other places, waiting to be called into the service. My understanding is that all of the units of the National Army are formed, and necessarily must be officered, and the fact that a few of the men have not been called in would not in any way affect the organizations, so far as the officers are concerned, and as I understand it, these 16,000 officers—or whatever the number may be—are all in the service. What do you know about that?

Lieut. BRETT. The selective draft act provides, of course, that the organizations now that are provided for in the Cavalry, the Field Artillery, and the Infantry will be organized under the provisions of the national defense act, and they will have the same officers. But section 2 provides for the special and technical troops. Those troops have a great many officers, and as Maj. Davis stated last night, all of the special and technical troops for the Quartermaster Corps are formed along the line of the Infantry organization. There is a regimental organization, and they have their officers in the same proportion, or about the same proportion as the Infantry. The other branches are not formed into regiments, such as the bakery companies.

Mr. McKENZIE. I do not think you understand yet what I am trying to get at. For instance, take the situation at Camp Grant, which is designated as a certain division of the Army. There is at that camp the Three hundred and forty-second Regiment that takes in the men from my congressional district. That regiment, of course, is organized, the companies are all organized, they are all officered, and the fact that there are 200,000 in the National Army who have

not been called into service will not increase the number of officers which are there now.

Lieut. BRETT. They are all skeletonized; they are formed.

The CHAIRMAN. In other words, if I understand it, the point is this: How many officers are there in the Regular organizations now, and how many are there in these special and technical units? You can separate them in that way.

Mr. McKENZIE. It seems to me it is perfectly plain how many officers there must be in the different camps now in the National Army, because they are all there.

The CHAIRMAN. As a matter of fact, most of the organizations are skeleton organizations, as I understand it, and many of the drafted men are being sent to the old National Guard regiments to fill them up. The officers are there, but the men are being sent to the skeleton organizations.

Mr. SHALLENBERGER. There are practically 78,000 officers of the line in the service. There are about 28,000 of them of all corps in the Regular United States Army and the National Guard, and you say practically all of them are line officers. Counting them all as line officers, you have approximately 50,000 line officers left for the National Army. Do you mean to say they are drilling with the National Army now?

Lieut. BRETT. The Adjutant General on Saturday——

Mr. SHALLENBERGER (interposing). They are commissioned, but what are they doing?

Lieut. BRETT. The Chief of Staff will have to answer that question, or the Acting Chief of Staff. We just take the figures they give us and put them in the estimates.

The next item is the General Staff, and they have 91 officers now. For an army of 3,000,000 men they want 348 officers, and I have given them 180. I think that is a fair proportion. The amount for the General Staff should now read \$416,340.

In The Adjutant General's Department I have not made any change, but left the number at 281. They have now 150.

The Inspector General's Department I have reduced from 246 to 150. They wanted 296 for an army of 3,000,000 men. The amount for pay should now read \$346,950.

There are no changes in the Engineer officers. Most of the Engineer officers are in the line.

In the Ordnance Department I have doubled the number. They have 2,366 officers, or they had that many on November 30. We provided for 2,000, and in the new estimate we have provided for 4,000. They want 7,988 for an army of 3,000,000 men, and that is about the proper proportion. It is a little over half. The amount for pay for the officers of the Ordnance Department should now read \$9,252,000.

There are no changes in the Quartermaster Corp; I left that at 8,300.

On January 25, 1918, there were commissioned in the Medical Department the following officers: 1 major general, 4 brigadier generals, 68 colonels, 122 lieutenant colonels, 1,376 majors, 3,757 captains, 18,927 first lieutenants, and 1,384 second lieutenants, which includes the Regular Medical Department, the Dental Corps, Dental Reserve Corps, Dental Reserve Corps of the National Guard, Veterinarians.

Veterinary Reserve Corps, Veterinary Reserve Corps of the National Guard, and National Army Veterinary Reserve Corps.

The Medical Department has 24,060 officers already commissioned, and I have provided for 14,000 in the estimate. I have increased that to 20,000. They asked for 1919, for an army of 3,000,000 men, 38,089 officers. The amount for pay for the officers of the Medical Department should now read \$46,260,000.

So far as the Judge Advocate General's Department is concerned, I have reduced that from 300 to 240. They have 132 now, and they want 461 for an army of 3,000,000 men. The amount for pay should now read \$555,120.

In the Signal Corps I have taken 2,000 out of the line and put them in the Signal Corps proper, which has no provision made for it. They gave us 11,941 as required for the aviation section in France. That makes the Signal Corps 13,891, and they have 1,354 in the Signal Corps proper, and in the aviation section 2,756. For an army of 3,000,000 men they want 5,000 in the Signal Corps proper and 18,006 in the aviation section, making a total of practically 23,000, and we have given them 13,891.

There is no change in the Philippine Scouts.

Mr. CALDWELL. You say they wanted how many?

Lieut. BRETT. You mean in the Signal Corps?

Mr. CALDWELL. Yes.

Lieut. BRETT. They want 23,006 officers for an Army of 3,000,000 men.

Mr. CALDWELL. That includes all branches of the service?

Lieut. BRETT. Yes.

Mr. CALDWELL. How many have you given them?

Lieut. BRETT. Thirteen thousand nine hundred and forty-one.

Mr. CALDWELL. Half of what they wanted.

Lieut. BRETT. It is practically half.

Mr. CALDWELL. How many have they now in the service?

Lieut. BRETT. They have 1,354 in the Signal Corps proper and 2,356 in the Aviation Section.

Mr. CALDWELL. What you have given them is less than they have now?

Lieut. BRETT. I have given them 13,941. They have now a little over 4,000.

That gives us altogether, Mr. Chairman, 126,000 officers. If the committee desires it, I can indicate the pages on which the changes in the printed bill occur, that is, where the changes are to be made.

The CHAIRMAN. You can put that in the record.

Lieut. BRETT. Recapitulating what I have said, the changes are as follows:

Officers of the line: For pay of 78,323 officers of the line-----	\$180, 698, 499. 00
General Staff Corps: For pay of 180 officers-----	416, 340. 00
Inspector General's Department: Pay of 150 officers-----	346, 950. 00
Ordnance Department: Pay of 4,000 officers-----	9, 252, 000. 00
Medical Department: Pay of 20,000 officers-----	46, 260, 000. 00
Judge Advocate General's Department: Pay of 240 officers---	555, 120. 00
Signal Corps: Pay of 13,941 officers-----	32, 245, 533. 00
Making a total, pay, etc., of the Army-----	1, 068, 281, 336. 04
A difference of-----	64, 347, 660. 00
Consisting of the pay of 26,000 officers at \$2,313	
each -----	\$60, 138, 000
Foreign-service pay-----	4, 209, 660
	<hr/> 64, 347, 660. 00

Lieut. BRETT. I wish to state, Mr. Chairman, in regard to the changes I have made in the matter of these additional officers, that I have provided nothing but the base and foreign-service pay; no service pay, no mileage, no commutation of quarters, or of heat, or of light, on the supposition that in all probability they might not get all the officers at the beginning of the year, and you would not get many officers anyway who had had any service, unless we get them from the Regular Army, and they already have service pay computed as enlisted men in the line, so that those figures would not be good if they did not wish to provide for 126,000 officers.

The CHAIRMAN. The next item is, "Reserve veterinarians, \$700,000." Will you explain that item?

Lieut. BRETT. They want 1,875 veterinarians to care for 750,000 animals of the Army.

Mr. KAHN. Is that number, 1,875 veterinarians, predicated on an Army of 3,000,000 men?

Lieut. BRETT. Yes, sir.

Mr. ANTHONY. For the Regulars and for the Reserves?

Lieut. BRETT. Yes, sir; all classes.

Mr. KAHN. How many should there have been for an Army of 1,612,245?

Lieut. BRETT. According to that they should have a little over 1,000 for an Army of 1,612,245 men; but this amount, \$700,000, will not pay for them. These are Reserve veterinarians. The commissioned veterinarians are included among the officers of the Medical Department—in the 20,000 officers. These are Reserve veterinarians, which you provided for under the act of June 3.

Mr. KAHN. You say you will probably require 1,000 of them for the size of the Army that is now provided for?

Lieut. BRETT. That is 1,000 veterinarians—officers of all classes. These Reserve veterinarians are only to be used in case they do not get commissioned officers. If they get the commissioned officers, the \$700,000 will not be used.

The CHAIRMAN. It has already been taken care of?

Lieut. BRETT. Everything except the Reserve veterinarians. They go out and hire civilian veterinarians, and if they have to go out and get those veterinarians, they do not get a commission in the Army, and they will be paid out of this \$700,000. The Surgeon General can tell you whether he is getting all the veterinarians he requires.

The CHAIRMAN. The next item is, "Contract surgeons, \$120,000."

Lieut. BRETT. That is a slight increase, raised from \$75,000 up to \$120,000, by direction of the Chief of Staff.

The CHAIRMAN. How many of them are there?

Lieut. BRETT. The Surgeon General requested that we provide a lump sum, because they give them from \$75 up to a maximum of \$150 a month, and so it is pretty hard to state just how many there are. I can put that in the hearings.

The CHAIRMAN. I wish you would do that.

The following shows the contract surgeons in service:

Full time, \$150 per month.....	120
Special, \$100 per month.....	2
Half time, \$75 per month.....	32
Total.....	154

The CHAIRMAN. The next item is, "Superintendent of Nurse Corps, \$1,800."

Lieut. BRETT. That is a statutory salary.

The CHAIRMAN. The next item is, "Nurses, \$13,808,920."

Lieut. BRETT. That is for 20,664 nurses.

The CHAIRMAN. How many have you now?

Lieut. BRETT. There were 4,300 on last Saturday. They are making a great effort to get nurses, as they need them very badly, but they are finding great difficulty in getting the required number.

Mr. TILSON. Do you know what they are paying the nurses?

Lieut. BRETT. They start at \$50 a month.

Mr. TILSON. What do they have in addition?

Lieut. BRETT. They have commutation of quarters and heat and light and commutation of rations.

Mr. TILSON. When they are serving in the field they receive only a place to stay and the ration?

Lieut. BRETT. They get \$50 a month, and they get service pay, and there is an increase when acting as chief nurse, and they get foreign-service pay.

Mr. TILSON. All of them get foreign-service pay, but most of them will be new nurses and will get no pay for length of service?

Lieut. BRETT. That is true.

Mr. ANTHONY. Are there 4,000 on duty now?

Lieut. BRETT. Yes, sir.

Mr. ANTHONY. In hospitals?

Lieut. BRETT. Yes, sir.

Mr. ANTHONY. There is need for that number?

Lieut. BRETT. Yes, sir.

Mr. KAHN. Are they men or women?

Lieut. BRETT. All women.

Mr. CALDWELL. They have a prescribed age for entering the service?

Lieut. BRETT. They have.

Mr. ANTHONY. You have not the figures, have you, to show how many men of the Army are now in hospitals?

Lieut. BRETT. No, sir; I have not; but the Surgeon General can give you those figures. He reports 38,148 patients in hospitals on January 12, 1918, which includes all patients then in hospitals.

The CHAIRMAN. You say they start at a salary of \$50 a month. How high do they go?

Lieut. BRETT. I could not state that exactly, but I think they go as high as \$80 a month.

Mr. CALDWELL. Are these nurses to become a part of the regular military service, and be subject to military discipline?

Lieut. BRETT. Yes, sir.

Mr. TILSON. They enlist for the war, the same as the men?

Lieut. BRETT. No; they are not enlisted; they are contracted; they sign an agreement.

Mr. CALDWELL. Are they not subject to military discipline?

Lieut. BRETT. Yes, sir.

Mr. TILSON. What kind of an agreement is it that they sign as to length of service? Is it during the emergency, or for a certain term?

Lieut. BRETT. Gen. Gorgas can tell you about that.

The following are the rates of pay of the nurses:

Members of the Nurse Corps (female) shall hereafter be paid \$50 per month for the first period of three years' service; \$55 per month for the second period of three years' service; \$60 per month for the third period of three years' service, and \$65 per month after nine years' service in said Nurse Corps. All female nurses shall hereafter be entitled, in addition to the rates of pay as provided, to \$10 per month when serving beyond the limits of the States comprising the Union and the Territories of the United States contiguous thereto (excepting Porto Rico and Hawaii). When serving as chief nurses their pay may be increased by authority of the Secretary of War, such increase not to exceed \$30 per month.—Act Mar. 23, 1910; G. O. 54, Apr. 6, 1910.

Service in the Army Nurse Corps prior to March 23, 1910, as well as subsequent thereto, is to be counted in determining the rate of pay an Army nurse receives from and after March 23, 1910.—Comp., Apr. 28, 1910, P. M. G. O., 82272.

The pay of chief nurses at general hospitals, at base hospitals, and on hospital ships will be their pay as nurses plus \$30 a month. The pay of other chief nurses will ordinarily be their pay as nurses plus \$20 a month; but in cases where special skill and capability are required the Surgeon General in his discretion may increase the additional amount to not more than \$30 a month.

(a) The additional pay provided for chief nurses as above can be allowed to them only when they are actually serving as such. When on leave of absence or en route between stations they can draw only their pay as nurses.—G. O., 106, W. D. 1910.

The increased pay authorized by law for chief nurses is given them for service as such in fact, and not because they are appointed as chief nurses. When not actually serving at hospitals where there are other nurses of whom they presumably are at the head, they only get the pay provided for all nurses.—Comp., May 7, 1910.

Members of the Nurse Corps may be granted leaves of absence for 30 days with pay for each calendar year.—Act Feb. 2, 1901, 31 Stat., 753; G. O., 9, 1901.

All female nurses shall hereafter be entitled to cumulative leave of absence with pay at the rate of 30 days for each calendar year of service in the Nurse Corps.—Act Mar. 23, 1910; G. O., 54, W. D., Apr. 6, 1910.

Nurses will not be granted extra leave of absence with pay because of illness.—Manual for the Medical Dept., G. O., 141, W. D., 1907.

The CHAIRMAN. What is the length of service before they get an increase?

Lieut. BRETT. Three years.

Gen. SHARPE. The maximum yearly increase is \$180.

The CHAIRMAN. For how much service?

Gen. SHARPE. For nine years service.

Mr. TILSON. The inducement, so far as pay is concerned now, would be \$50 a month?

Lieut. BRETT. Plus foreign service pay of \$10 a month extra. If a woman is capable of being a chief nurse, she would get more. She gets from \$50 up to \$55, \$60, and \$65 for three, six, and nine or more years' service.

Mr. CALDWELL. Is that pay statutory?

Lieut. BRETT. Yes, sir; that is statutory pay.

Mr. TILSON. And the foreign-service pay is 20 per cent additional?

Lieut. BRETT. \$10 a month.

The CHAIRMAN. You have already explained the items in reference to the Judge Advocate General's Department, the Signal Corps, and the Bureau of Insular Affairs. The next item is:

Retired officers: For pay of officers on the retired list, \$2,821,125."

Lieut. BRETT. That amount is computed on 1,030 officers, and 47 officers of the Philippine Scouts. There are 3 lieutenant generals, 31 major generals, 171 brigadier generals, 176 colonels, 93 lieutenant

colonel, 212 majors, 205 captains, 88 first lieutenants, and 23 second lieutenants. Of the chaplains, there are 2 lieutenant colonels, 14 majors, 8 captains, and 1 first lieutenant. Then there are 3 professors of the Military Academy and 47 officers of the Philippine Scouts, their pay being that of a master signal electrician. The Philippine Scouts retired officers are made up of 28 captains, 16 first lieutenants, and 3 second lieutenants.

Mr. QUIN. Can you tell us who the three lieutenant generals are?

Lieut. BRETT. Gen. Miles, Gen. Bates, and Gen. Young.

Mr. CALDWELL. They got their rank of lieutenant general by reason of the fact that they had Civil War experience, and were retired one grade higher than the rank in which they were serving at the time of retirements, did they not?

Gen. GOETHALS. The grade of lieutenant general was established and Gen. Miles was appointed to that grade. On the retirement of Gen. Miles, Gen. Corbin was selected, or Gen. Chaffee, and when the next vacancy occurred Gen. MacArthur was appointed, and it went on down. That left living now those three lieutenant generals, who succeeded to that grade under the provisions of the act of Congress.

Lieut. BRETT. When the vacancy to which Gen. MacArthur should have succeeded as Chief of Staff was filled by the appointment of Gen. Bell, Congress said that if the office of Chief of Staff was not for the lieutenant general there was no use for the grade to exist, and it was abolished.

Mr. KAHN. That was not the only reason that actuated Congress. Congress felt there ought to be something to give officers who distinguished themselves in the field. If you gave that rank to every man who happened to be Chief of Staff you would not have anything to give those men whose services in the field warranted their promotion to the grade of lieutenant general.

Mr. ANTHONY. Now, as I understand it, we have revived the grade of lieutenant general for the Chief of Staff?

Lieut. BRETT. We have the grade of general for the Chief of Staff and for Gen. Pershing, and the grade of lieutenant general for the commanding generals of the Army corps.

The CHAIRMAN. There has been no lieutenant general appointed?

Lieut. BRETT. No, sir.

The CHAIRMAN. How many retired officers are there back in active service now?

Lieut. BRETT. There are 1,085—1,038 Regular officers and 47 Philippine Scouts.

The CHAIRMAN. In the service?

Lieut. BRETT. You mean in the active service?

The CHAIRMAN. Yes.

Lieut. BRETT. There are 409 in the active service and 40 Philippine Scout officers.

The CHAIRMAN. I notice this appropriation is a little larger than the appropriation last year. As a matter of fact, there are more retired officers on active duty now than there were last year?

Lieut. BRETT. A great many more.

The CHAIRMAN. Then why could not this amount be lower than it was last year, the amount for retired pay?

Lieut. BRETT. You mean the gross sum of the retired pay?

The CHAIRMAN. Yes.

Lieut. BRETT. Because those in the higher grades are becoming less all the time. In 1903 and 1904, under the act of April 23, 1904, there were a great many officers who were created brigadier generals. That act provided that all officers who had had Civil War service could be retired with an increased grade, and a great many brigadier generals were made. They are dying off.

The CHAIRMAN. But the question is the other way. That ought to make it less. You are making the amount more. The point I was making was why, with more retired officers on the active list this year than last year, the amount of the estimate for the pay of the retired officers is greater than it was last year.

Lieut. BRETT. The retired officers are paid their retired pay out of this item whether on active duty or not, and there being more retired now than in 1917 the appropriation for their pay is naturally more than in that year.

Mr. KAHN. You have a deficiency in that this year?

Lieut. BRETT. No; it is a lump-sum appropriation.

Mr. TILSON. Did you pay out more to retired officers than we allowed under this item?

Lieut. BRETT. I can give you the amount for 1917. I can give you the exact cost for 1917. The retired officers in 1917 were actually paid—we do not know whether they have all been paid, but their base pay was \$2,780,466, and service pay amounted to \$484,304. The pay of retired veterinarians amounted to \$4,652.50, and the pay of pay clerks amounted to \$21,750.72.

Mr. KAHN. How much of this \$2,700,000 that we appropriated for the fiscal year 1918 have we paid out?

Lieut. BRETT. That is impossible to tell. We have no reports on the cost for 1918 yet.

Mr. KAHN. Could you not tell how much you have expended of that amount?

Gen. SHARPE. We can have that looked up.

Mr. KAHN. Then we would know how much you have to carry you on for the balance of the fiscal year.

Lieut. BRETT. We can tell you how our pay appropriation was spent for 1917.

Gen. SHARPE. We can have that matter put in the hearings.

(The matter referred to is as follows:)

Total pay of the Army appropriated for 1918.....	\$842, 639, 118. 30
Obligated to Dec. 29, 1917.....	334, 919, 932. 45

Balance available for period Dec. 29, 1917, to June 30, 1918.	507, 719, 185. 85
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Lieut. BRETT. I believe this amount will see us through.

Mr. SHALLENBERGER. Is not the explanation of this amount for the retired officers' pay found in the fact that you have another item for the increase in pay of these officers while they are serving on the active list, and that you have been appropriating for them on the active officers' list?

Lieut. BRETT. This item for pay of officers on the retired list, plus the item increased pay to retired officers on active duty, comprises the pay for all retired officers. They receive no pay from the appropriations made for officers on the active list.

Mr. GREENE. Are we to understand that from month to month you can not tell the amount of money expended under any item of an appropriation?

Lieut. BRETT. Let me illustrate it: Take the routine accounts, which are paid in the Philippine Islands. They are paid for July in August. The disbursing officer has until the 20th of September to send his account off. It takes at least 35 days, probably 40 days, for the account to reach Washington. That would bring it up to the end of October. In Washington they have 90 days in which to examine the account before it is sent to the auditor, and that would bring it up to the end of January before we could get a report on the month's cost. In case it is necessary, we can take out the disbursing officers' account current and check up these items, but in order to do that we would have to stop the work of the office, but if there is an occasion to do it, we can do it. We can take the accounts current and see how much has been paid out for the pay of the Army.

Mr. TILSON. Is it not a more practicable way to compare 1917 with 1919?

Mr. GREENE. I am not looking for comparisons. I would like to see what is in the chest. Here is a banking house, for instance, that is doing business, not only in connection with incidental monthly pay rolls, but doing the actual transactions in foreign exchange, or is in connection with all sorts of commercial transactions day by day, and it has agencies located in every habitable part of the civilized globe, and yet those people know at the end of the month how much money they have got.

Lieut. BRETT. We know how much money we have got.

Mr. GREENE. They know where the money went.

Lieut. BRETT. We can not tell the items, but we do know that of the pay of the Army we gave out on requisitions we had left up to the 29th of December a balance of \$507,719,185.85 in pay for 1918. The amount in the hands of disbursing officers is supposed to carry them during the first six months of the fiscal year, or to December 31. We can tell you that in five minutes' time, at any time, but we can not get the disbursing officers' accounts; they are too far scattered, and it takes too long to analyze those accounts. But if we want to get a close analysis of the pay item, we can take out those accounts, take the accounts current and check off the items you are looking for, and we would check that against the requisition account, the money we have drawn out of the Treasury and put into the hands of disbursing officers.

Mr. GREENE. The Government does not know where this money has gone, but a private concern can tell you where its money has gone, every month.

Lieut. BRETT. We can easily find that out.

Mr. GREENE. It seems strange that the Government can not do that as well as a private concern.

Gen. GOETHALS. I do not think that is exactly fair.

Mr. GREENE. I mean the system.

Gen. GOETHALS. The system is not any different from a banking system.

Mr. GREENE. I am talking about a particular system.

Gen. GOETHALS. They have a system. They know how much they have in hand, and they know how much they have allotted the disbursing officer.

Mr. GREENE. But they do not know when a man will present a credit and get the money. That is where the delay comes.

Gen. GOETHALS. At the close of the month the disbursing officer sends his account current here, and he knows from that how much he has on hand the 1st of the month. That is all a bank would know.

Mr. GREENE. The distinction is that the commercial banking agency knows what credits may be out, and they may, in their book-keeping, figure on that until the credit is presented.

Gen. GOETHALS. It is the same way here.

Mr. GREENE. In these cases the officers and soldiers are in garrison, and they have a formal monthly pay roll according to which they are paid, and it seems to me that six months is a long time before you know where the successive items involved in the first month's accounts are.

Gen. GOETHALS. The six months he was explaining about is the final check up on the account of the officer in the Philippines by the auditing authorities in Washington. If he renders his account on the 1st of the month, his account current comes here, and he ought to know in his office just what that officer has on hand on the 1st of the month. He is talking about the final closing up of the audit in Washington, which is an entirely different matter.

Mr. GREENE. That looks slow.

Gen. GOETHALS. It is cumbersome, but he can determine, as soon as the officer's account current for the month comes in, what cash that officer had on hand the 1st of the month.

Gen. SHARPE. An extreme case was taken of the officer in the Philippine Islands. Of course, we get them in from the different officers in this country much quicker than that.

Lieut. BRETT. If the occasion arises, we can, by cable and telegraph, get the balances on the accounts in 72 hours from the remotest point.

Mr. GREENE. It does seem to me that in the final accounting in Washington six months is a long time.

Gen. GOETHALS. The law provides when the accounts shall be sent here, and the law provides that within 90 days from their receipt in Washington they must be sent to the Auditor for the War Department. The chief of the bureau may take that time, and he may not.

The CHAIRMAN. In this item you appropriate the regular pay for retired officers, and then you have another item providing for the increased pay to those who are on active duty, and you carry that in those two items, instead of carrying these officers in the regular item for the pay of officers of the Army?

Lieut. BRETT. Yes; part of the pay is carried under the other item. All the other pay for retired officers is carried under this one item, whether on active or inactive duty.

The CHAIRMAN. The item providing for the increased pay which these officers get while on active duty is carried in a separate item on this same page, the amount of item being \$750,000?

Lieut. BRETT. Yes, sir.

Mr. KAHN. Is there any likelihood of their taking any more of the retired officers into active service?

Gen. SHARPE. I do not believe so, because the list has been gone over very carefully.

Mr. KAHN. Has the President the right to order any retired officer to the active list?

Gen. SHARPE. Yes, sir.

Lieut. BRETT. Under the provisions of section 24 of the act of June 3, 1916.

The CHAIRMAN. The next item is, "Retired enlisted men: Pay of retired enlisted men, \$3,196,512."

Lieut. BRETT. That is based on a per capita of \$60.54 a month, which is a very carefully worked-out per capita, and it is for 4,400 men. On July 13 there were 4,303 men on the retired list.

Mr. ANTHONY. And they draw over \$3,000,000?

Lieut. BRETT. Yes. That is a per capita of \$726.48 a year.

Mr. ANTHONY. Nearly all of them have been retired as noncommissioned officers?

Lieut. BRETT. No; there are some privates. I can read the entire list, if you care for it.

Mr. ANTHONY. How many sergeants are there?

Lieut. BRETT. I will give you the entire list:

RETIRED ENLISTED MEN.

Sergeants major, regimental	98	Cooks	264
Sergeants major, senior grade, Artillery Corps	6	Farriers and blacksmiths	4
Sergeants major, junior grade, Artillery Corps		Saddlers	3
Sergeants major, squadron	17	Wagoners	
Sergeants major, battalion	35	Trumpeters	1
Ordnance sergeants	188	Mechanics	5
Post commissary sergeants	146	Musicians and first-class musicians	20
Regimental commissary sergeants and supply sergeants	80	Artificers	18
Post quartermaster sergeants, Quartermaster Corps	187	Privates, first class, Hospital Corps	33
Regimental quartermaster sergeants and supply sergeants	118	Privates, first class, Ordnance, Engineers, Signal Corps, and Supply	36
Electrician sergeants		Privates, second class, Ordnance, Engineers, and Signal Corps	1
Sergeants, first class, Hospital Corps and Medical Department	147	Privates, Hospital Corps	
Sergeants, Hospital Corps and Medical Department	57	Privates, Artillery, Cavalry, and Infantry	96
First-class sergeants, signal Corps	36	Master signal electricians	37
Chief musicians and band leaders	117	Battalion quartermaster sergeants, Field Artillery	1
Principal musicians	35	Acting cooks, Hospital Corps	25
Chief trumpeters	19	Firemen	1
Color sergeants	127	Engineers	2
Battalion quartermaster sergeants, Engineers	3	Master gunners	1
First sergeants, Artillery, Cavalry, Infantry, and Engineers	1,425	Electrician sergeants, first class and second class, Coast Artillery Corps	3
Drum majors	26	Master electricians, Coast Artillery schools detachment	
Sergeants of Ordnance	159	Sergeants, Quartermaster Corps	12
Sergeants of Engineers	73	Sergeant buglers	2
Sergeants of Signal Corps	21	Musicians, second class	1
Sergeants of Artillery, Cavalry, and Infantry	447	Sergeants, first class, Quartermaster Corps	1
Troop, battery, and company quartermaster sergeants	17	Mess sergeants	2
Stable sergeants	1	Sergeants, first class, Engineers	1
Saddler sergeants	4	Assistant band leaders	4
Corporals, Hospital Corps and Medical Department	7	Horseshoers	1
Corporals of Engineers	10	Master engineers, junior and senior grade	1
Corporals of Ordnance	46	Master hospital sergeant, Medical Department	6
Corporals of Signal Corps	2		
Corporals of Artillery, Cavalry, and Infantry	67	Total	4,303

Mr. TILSON. How many privates did you say there are?

Lieut. BRETT. There are 69 privates, first class, and 97 privates, second class, and privates.

Mr. TILSON. That is a commendably small number of privates.

Lieut. BRETT. A man who stays 30 years in the service ought not to have been a private when he retired; he ought to have been higher than that.

The CHAIRMAN. The next item is, "Pay and allowances of retired enlisted men on active duty, \$95,000." How many of those men are there?

Lieut. BRETT. On December 31 there were 380 of those men on active duty. The amount of \$95,000 is simply a guess. We had nothing to go on.

Mr. TILSON. Are they coming into the active service?

Lieut. BRETT. Very rapidly. On June 30 there were 151 and on December 31 there were 380. They are broadening their duties very rapidly.

The CHAIRMAN. How many retired men are there?

Lieut. BRETT. On July 13 there were 4,303. The estimate is based on 4,400. Gen. McCain, in his report on page 15, says:

RETIRED ENLISTED MEN.

At the beginning of the fiscal year there were 4,154 men on the retired list created by the provisions of the act of Congress approved February 14, 1885 (23 Stat. L., 305), modified by the acts of Congress approved September 30, 1890 (26 Stat. L., 504), March 2, 1907 (34 Stat. L., 1218), and August 24, 1912 (37 Stat. L., 575).

During the fiscal year 342 enlisted men were placed on the retired list, 192 of the men on that list died, and 1 was transferred to the list of retired commissioned officers of Philippine Scouts, under the provisions of the national defense act approved June 3, 1916, leaving 4,303 enlisted men on the retired list at the end of the fiscal year.

Section 7 of the selective-service law, approved May 18, 1917, authorizes the employment on any active duty of retired enlisted men of the Regular Army, either with their rank on the retired list or in higher enlisted grades, with full pay and allowances of the grades in which they are actively employed. At the end of the fiscal year 151 retired enlisted men had been ordered to active duty under the provisions of that section.

The CHAIRMAN. The next item is, "Pay and allowance of Regular Army reservists on active duty, \$5,000."

Gen. SHARPE. That item is put in there just in order to have an item of that kind in the bill.

Mr. ANTHONY. What has become of those men?

Gen. SHARPE. You mean the Regular Army reservists?

Mr. ANTHONY. Yes.

Lieut. BRETT. They have all been called to the colors.

Mr. ANTHONY. Then you do not pay them as reservists?

Lieut. BRETT. No, sir. When they called the reserve men to the colors they had 8,350 in the Regular Army Reserve, and on October 1 they had 55,000 in the Enlisted Reserve.

Mr. ANTHONY. When they are called to the colors their reserve pay stops, and when they leave the colors their pay goes back?

Lieut. BRETT. Yes, sir; in the case of the Regular Army Reserves. Members of the Enlisted Reserve Corps are paid only when called to the colors.

The CHAIRMAN. How many did you have in October?

Lieut. BRETT. Of the Enlisted Reserve there were 55,000.

Mr. ANTHONY. How many in the Regular Army Reserve?

Lieut. BRETT. There were 8,350 when they were called to the colors.

The CHAIRMAN. The next item is, "Miscellaneous, 30 hospital matrons, \$3,600."

Mr. TILSON. Where are they located?

Gen. SHARPE. They are located at the hospitals?

Mr. TILSON. Thirty of those will not go very far.

Gen. SHARPE. Where laundries were established.

Mr. TILSON. At a laundry?

Gen. SHARPE. Yes.

Capt. DALY. They get \$10 a month and their rations and, of course, they are furnished quarters. As a general thing they are the widows of enlisted men.

Mr. TILSON. The small number of them attracted my attention.

Gen. SHARPE. They are passing out. They are stationed at the larger posts.

Lieut. BRETT. They will very soon disappear completely.

The CHAIRMAN. The next item is, "For expenses of courts-martial, courts of inquiry, military commissions, retiring boards, and compensation of reporters and witnesses attending same, and expenses of taking depositions and securing other evidence for use before the same, \$250,000."

Lieut. BRETT. The amount of that item is \$250,000.

The CHAIRMAN. That is a mere guess?

Lieut. BRETT. Practically a mere guess, but it will be all of that.

The CHAIRMAN. Necessarily the courts-martial have increased very much with the increase in the size of the Army.

Gen. SHARPE. Yes, sir.

The CHAIRMAN. The next item is, "For additional pay to officer in charge of public buildings and grounds at Washington, D. C., \$1,000."

Lieut. BRETT. That gives Col. Fridley, the officer in charge of public buildings and grounds, the difference between his pay as a major and that of a colonel. That is a matter of law. The officer in charge of public buildings and grounds has the rank, pay, and allowances of a colonel.

Mr. McKENZIE. Last year that appropriation was \$500.

Lieut. BRETT. That was because the officer in charge was a lieutenant colonel, and the difference in pay was \$500.

The CHAIRMAN. The next item is, "For commutation of quarters and of heat and light to commissioned officers, members of the Nurse Corps, and enlisted men on duty at places where no public quarters are available, including enlisted men of the Regular Army Reserve, and retired enlisted men when ordered to active duty, \$1,500,000."

Lieut. BRETT. That is a decided reduction from what you gave us for 1918.

The CHAIRMAN. The next item is, "For interest on soldiers' deposits, \$150,000." That is the same as last year.

Gen. SHARPE. Yes.

Mr. SHALLENBERGER. That is a fixed sum required by the act?

Lieut. BRETT. The law requires us to pay 4 per cent interest on soldiers' deposits.

The CHAIRMAN. The next item is, "For pay of expert accountant for the Inspector General's Department, \$2,500." That is the same as last year?

Lieut. BRETT. Yes, sir.

The CHAIRMAN. The next item is, "For extra pay to enlisted men employed on extra duty for periods of not less than 10 days in the offices of coast defense artillery engineers and coast defense ordnance officers and as switchboard operators at seacoast fortifications, \$19,202.45." That is an increase of approximately \$3,000 over last year, and I suppose the increase is because of the additional number required to be employed in the service.

Lieut. BRETT. That is an increase of 7 clerks and 16 switchboard operators.

Mr. KAHN. I would like to ask you something about the item "Commutation of quarters, heat, and light to commissioned officers," at the bottom of page 23. A great many reserve officers' wives have appealed to me and have told me that they were being discriminated against; that they have no commutation, whereas Regular Army officers have commutation. Have you thought it necessary to formulate any legislation for the commutation of heat and light and quarters for the National Army officers and reserve officers generally? Have you thought of that?

Gen. SHARPE. The suggestion was made at the time the matter was brought up, in view of the verbiage of the law and the decision of the Comptroller of the Treasury that an officer occupying Government quarters was not entitled to commutation of quarters, heat, and light. The comptroller has ruled that occupying a tent is occupying Government quarters, and that it goes as a part of the service in the Army.

Capt. DALY. The provision of law that is in here—answering your question—provides for quarters for officers of the Reserve Corps of the National Army.

Gen. SHARPE. When they are stationed where public quarters are not furnished. But the question I understood Mr. Kahn to bring up was in regard to the wives of officers of the Reserve Corps and National Army whose husbands are in the field.

Under the law, we can not do that, because they are occupying Government quarters. There was a proposition brought up submitting a bill providing for the payment of commutation of quarters, heat, and light at all times, but I do not know that the matter has gone beyond the mere drafting of the measure in the department. The figures would be, I think, something like \$60,000,000 or \$70,000,000.

Mr. KAHN. You mean that that decision was to the effect that an officer in one of these cantonments would be considered in the field with troops?

Gen. SHARPE. Yes; that an officer serving in a cantonment was in the field.

Mr. GREENE. If, previous to that assignment he and his family were occupying officers' quarters in a garrison, the family were permitted to stay; is that not true?

Gen. SHARPE. That is simply a permission from the post commander; and he gets no fuel.

Mr. GREENE. But there is no turning of them out?

Gen. SHARPE. They do not turn them out, because the quarters are better occupied than vacant.

Mr. ANTHONY. But if the Government required those quarters, the Government would turn them out?

Lieut. BRETT. The act approved March 4, 1915—H. R. 20347, an act making appropriations for the support of the Army for the fiscal year ending June 30, 1916—the act under which commutation is now paid, provides—

Hereafter, at places where there are no public quarters available, commutation for the authorized allowance therefor shall be paid to commissioned officers, acting dental surgeons, veterinarians, members of the Nurse Corps, and pay clerks at the rate of \$12 per room per month, and, when specifically authorized by the Secretary of War, to enlisted men at the rate of \$15 per month, or in lieu thereof he may, in his discretion, rent quarters for the use of said enlisted men when so on duty.

It will be noted that the law says "Commutation for the authorized allowance therefor shall be paid to *commissioned officers*." Therefore, any commissioned officer of any arm, corps, or department, whether he belongs to the Regular Army, the National Guard, or the National Army, when in the Federal service and stationed at a place where Government quarters are not available, is entitled as a right to be paid commutation of quarters, and no payment in such cases can be successfully denied. This applies to all cases, except where troops take the field.

When troops are sent into the field, we are governed by the following decision of the Judge Advocate General of the Army, rendered on June 6, 1905:

When an officer is ordered to take the field his status in respect to quarters is changed. He ceases to be entitled to quarters in kind or to commutation therefor and becomes entitled to a certain allowance of tentage and camp equipage, which constitutes his shelter while engaged in field service.

On June 8, 1906, the Comptroller of the Treasury held that—

An officer furnished a tent is viewed as furnished with quarters in kind.

On June 15, 1917, the Secretary of War caused the following order to be issued:

Duty with troops in the field during present war is not temporary duty.—All duty with troops of any kind in the field, at home or abroad, during the present war will be considered as not temporary duty in the field in contemplation of the act of Congress approved February 27, 1893, which provides that officers temporarily absent on duty in the field shall not lose their right to quarters or commutation thereof at their permanent stations while so temporarily absent. Under this decision no officer or enlisted man on duty in the field can have any official station elsewhere within the meaning and contemplation of the laws and regulations relating to the allowance of quarters or commutation thereof, but while on such duty his rights as to quarters will be as prescribed for field service. (W. D. Bulletin No. 35, June 15, 1917.)

The effect of the foregoing order was to place all officers and men not garrisoning our permanent posts or stationed in cities not in command of or connected with enlisted men on a status of field duty and for quarters, bringing them under the operation of the Judge Advocate General's decision.

The act of February 27, 1893, referred to in the War Department order of June 15, provides:

Officers temporarily absent on duty in the field shall not lose their right to commutation at permanent station. (27 Stat., 480.)

Inasmuch as the order of June 15 designates all duty with troops of any kind in the field, at home or abroad, during the present war as not temporary duty, the act of February 27, 1893, can have no application to any one so long as the war continues, and all officers on duty with troops in the field are not entitled to commutation of quarters.

Mr. KAHN. The trouble seems to arise with the reserve officers.

Lieut. BRETT. They are on exactly the same status with the Regulars, because the act refers to commissioned officers of the Regular Army, reserve officers, etc., and says if they are on duty at places where the Government owns quarters, and they occupy those quarters, they shall not get commutation, but if they are on duty at stations where public quarters are not available, they are entitled to commutation of quarters until they are ordered into the field. And when they are ordered into the field they get no commutation. The decision says that when they are in the field they are entitled to a tent, and, therefore, nothing can inure to the benefit of the officer's family when he occupies a tent.

Mr. KAHN. You are simply following the decision?

Lieut. BRETT. Yes, sir.

Gen. SHARPE. There is no discrimination as to the various classes of officers. It did happen that some Regular Army officers' families were occupying quarters at posts, and they have gone off, and those quarters are not required by the Government; the families have been allowed to keep them. But the question was brought up during the Texas mobilization of troops, where officers desired to take their families with them. They could remain at the posts, but we could not keep anybody down there.

Mr. TILSON. You can recognize the injustice of that; say a man is a major, he gets five rooms or he gets commutation to pay for five rooms in the city. But if he goes to camp he only gets a tent, and his wife can not live in the tent with him in the camp. His wife must go on the street unless he has money enough to hire quarters. There is the injustice of it. He goes in a tent when he goes into the field, where his wife can not come, and his wife and children have to be thrown out.

Mr. ANTHONY. When a man accepts a commission in the National Army, the Government is under no obligations to house his family?

Gen. SHARPE. No.

Mr. GREENE. But he has no permanent station.

Mr. ANTHONY. But if he is given a station at a permanent post his family is housed.

Mr. KAHN. The matter has been brought to my attention through a great many letters, and I wanted to find out just what the status of the matter is.

Mr. HARRISON. I have been informed that there was a bill before the committee covering that.

Mr. SHALLENBERGER. There is no distinction between a reserve officer and a Regular officer on that proposition?

Lieut. BRETT. Absolutely not. The law gives to every officer in the Army the same pay and allowance, whatever branch of the service he is in.

Mr. GREENE. But the fact remains that the Regular officers, most of whom have regular posts, have been assigned to posts, and their families can stay there, while the reserve officers have no such assignments, and their families can not stay there.

Mr. SHALLENBERGER. But suppose all these Army officers in the posts have been sent away and other officers have been sent there to the post; the wives of the men who have been sent away have to get out of there.

Gen. SHARPE. That has happened.

Mr. SHALLENBERGER. It is usually so.

Mr. KAHN. Take the case of the man whom Col. Tilson refers to, a Regular Army officer who gets his commutation and who has room there for his wife and children, but who is subsequently detailed to the field. He has to pay rent, then, out of his own pocket for his wife and family.

Lieut. BRETT. There are a good many officers on duty in Washington who would rather be in the field, but somebody has to stay here to transact the business.

Mr. TILSON. But they are penalized for going to the field.

The CHAIRMAN. At any rate the law would have to be changed.

Lieut. BRETT. Yes, sir.

The CHAIRMAN. The next item is "For mileage to commissioned officers, members of the Officers' Reserve Corps when ordered to active duty, contract surgeons, expert accountant, Inspector General's Department, Army field clerks, and field clerks of the Quartermaster Corps, when authorized by law, \$3,000,000."

Gen. SHARPE. For mileage we received in the act of June 15, \$510,000. We received in the act of October 6, \$1,490,000, making a total of \$2,000,000 in all. We have obligated against the first appropriation of \$510,000, \$508,777.69, leaving unobligated \$1,722.31. We have obligated against the \$1,490,000, \$3,864,234.34, making a total deficit of \$2,273,012.03. Those were absolutely necessary expenditures, made in order to permit the travel of the officers ordered on duty. We will need all the money which was asked for in the bill, \$3,000,000. It is probable that more will be required.

Capt. DALY. We have a deficiency estimate in now for \$3,000,000 for mileage.

Mr. KAHN. Have you sent a supplemental estimate in?

Capt. DALY. For 1919?

Mr. KAHN. Yes, sir.

Capt. DALY. No, sir. The total of mileage for 1918, what has been appropriated, \$2,000,000, plus the deficiency of \$3,000,000 makes the total requirement of \$5,000,000 for 1918. And the estimate is \$3,000,000 for 1919.

The CHAIRMAN. Why is it \$2,000,000 less?

Capt. DALY. In the fiscal year 1918 there was a great deal more travel because the Army was in its formative period. There was a great deal more travel necessary than there will be in 1919. The great bulk of troops will probably be in France in 1919. They will be in the field with troops.

(b) Cost of seat in parlor car, one lower berth in sleeping car, or stateroom accommodations on steamer, where same are not included in the travel fare, and reasonable fees to porters or to stewards.

(c) Hire of special transportation, either by land or by water, where there are no regular means of conveyance. Ferriage, tolls, driver's service and horse keeping when transportation is hired.

(d) Transfer coach fare en route to and from depots and hotels, or when there are no such conveyances, moderate and necessary taxicab or hack hire not to exceed the authorized local rates, any cost of transfers of baggage, and reasonable fees to porters for handling baggage.

(e) All items of actual expenses authorized when traveling, are for travel by the shortest usually traveled routes, and expenses incurred by any deviation from the shortest usually traveled routes, can not be considered as actual and necessary expenses.

3. In submitting accounts War Department Form No. 330 or 330a will be used, and when traveling expenses are claimed they will be itemized on the face of the voucher and a certified copy in duplicate of the letter or order directing or authorizing the travel attached to the voucher. In stating the voucher the printed columns thereon should be ignored, as should also the second printed certificate. The officer or enlisted man will certify on the voucher that the account is correct, and when traveling expenses are claimed that the amounts charged were actually paid by him. Vouchers will be mailed by the officer to the department quartermaster of the territorial department in which he is located or to the depot quartermaster, Washington, D. C., for payment. Vouchers submitted by enlisted men will be approved by the proper commissioned officer of his Army and disposed of by said officer in the same manner as he disposes of his own voucher.

4. Officers and enlisted men of foreign armies who have been attached to and performing duties with the Army of the United States for any period from the date of the declaration of war, April 6, 1917, to October 31, 1917, will submit on the voucher forms herein mentioned, using such additional attached sheets as may be necessary, a statement of their actual expenses, using the following as a basis of what is allowable:

When not traveling, the actual and necessary cost of meals, lodging, heat, light, baths, reasonable fees to waiters and bellboys, and the actual cost of laundry.

When traveling, (a) same items as set forth in subparagraphs a, b, c, and d, paragraph 2, adding thereto the actual cost of meals when not included in the charge for travel fare.

(b) The accounts for these past expenses will be sent to the Adjutant General of the Army for the consideration of the Secretary of War with a view to settlement by the depot quartermaster, Washington, D. C., of all items which may be approved by the Secretary of War. The accounts of enlisted men will be sent through the proper commissioned officer of their Army who will indorse thereon the amount which he considers properly allowable.

(336.4, A.G.O.)

By order of the Secretary of War:

JOHN BIDDLE,
Major General, Acting Chief of Staff.

Official.

H. P. MCCAIN,
The Adjutant General.

Capt. DALY. The instructions given by the War Department cover the whole situation.

The CHAIRMAN. The next item is, "For additional twenty per centum increase of pay of enlisted men on foreign service, \$56,413,355.20."

Have you estimated for 70 per cent of the Army of 1,612,245 men in reference to that item?

Gen. SHARPE. Yes, sir; the same amount.

Lieut. BRETT. The aviation increase is \$4,916,800; for marksmanship, \$3,000,000; the reservists' pay is \$9,485,000. The total amount

is \$402,959,680, 70 per cent of which is \$282,071,776, and 20 per cent of that is \$56,414,355.20.

Mr. ANTHONY. How much additional labor would it involve in the department to withhold the additional 20 per cent of pay until the men were discharged?

Gen. SHARPE. It would be considerable; with the allotment proviso we now have the work is enormous.

Mr. ANTHONY. I think the suggestion has been made that the men should not have all that money in France, but it ought to be held until they returned, and I wondered if you had given any consideration to that matter.

Gen. SHARPE. There is a requirement for a compulsory allotment.

Mr. ANTHONY. For the support of the families.

Gen. SHARPE. And also for the individual who is not married. He has to make a compulsory deposit.

Lieut. BRETT. Section 203 of the war-risk insurance act provides that that part of one-half of every enlisted man's pay may, under regulations to be formulated by the Secretaries of War and of the Navy, be compulsorily deposited.

Mr. ANTHONY. The regulation has been formulated?

Lieut. BRETT. The regulation has been formulated, compelling the enlisted men, every one of them, to deposit that part of one-half of their pay which is not allotted. The Navy Department has not yet made that regulation. My understanding is that the regulation is before the President at this time, in order that there may be uniform action.

The CHAIRMAN. That is in the war-risk insurance bill?

Lieut. BRETT. Yes, sir.

Gen. SHARPE. I think you made it so that particular amount can be differentiated out.

Mr. ANTHONY. I did not know the department had adopted such a regulation.

Mr. McKENZIE. I understood you to say that part not already allotted.

Lieut. BRETT. Yes.

Mr. McKENZIE. We understood, when we passed the act, that it provided that, where there were dependents, there should be a compulsory allotment of not to exceed one-half of the pay, and also that the War Department would have a right to increase that; and, if it be thought to be good policy, withhold it from the man's pay if he did not have dependents. But I understand you to say that a regulation has been made absolutely withholding one-half of a man's pay who has no dependents.

Lieut. BRETT. Yes.

Mr. McKENZIE. Or is it only in cases where a man allots a portion of his pay to his dependents, and the Government withholds the remainder?

Lieut. BRETT. That is founded on section 203, and that regulation says that the part or portion of one-half of a soldier's pay which is not allotted will be withheld, and entered in the deposit book, the same as the other deposits under section 1305 of the Revised Statutes. He gets 4 per cent, compounded semiannually. If his amount

of pay is \$50, and he has no dependents, they make his deposit \$25, if he has no other obligations to meet.

Mr. McKENZIE. I want to know whether that applies to all?

Lieut. BRETT. To all now. That is the regulation which has not yet been approved. It is before the President now; and under it the same principle applies to both the Army and the Navy.

The CHAIRMAN. It has not been approved?

Lieut. BRETT. I understand that it has not been approved by the Secretary of War as yet.

The CHAIRMAN. My attention has been called to an instance where it has been enforced sometime ago.

Lieut. BRETT. The disbursing officer probably withholds that as a matter of precaution.

Mr. KAHN. Do you know whether the disbursing officer has been withholding it, generally?

Lieut. BRETT. Not generally; no, sir.

Mr. McKENZIE. The purpose of that, in my mind, was that it was in the interest of the morale of the Army in France, and we simply gave the Secretary of War and the President the power to enforce that if they thought it best.

Lieut. BRETT. I was detailed by the War Department to represent it on the interdepartmental committee to coordinate the work of the Treasury, War, and Navy Departments under the war-risk insurance act. I went to the secretary of the General Staff to ascertain what the policy of the War Department was to be along that line. Col. Graves immediately dictated an order of the Secretary of War, calling upon the War College to make recommendations, and they came back with a recommendation that it apply to all enlisted men wherever stationed, and the regulations were formulated accordingly, and my understanding is that they are before the Secretary of War.

The CHAIRMAN. But the regulations have not yet been promulgated?

Lieut. BRETT. Not yet.

The CHAIRMAN. They have no right to withhold it?

Lieut. BRETT. The law says under such regulations as he may prescribe—as the Secretary may prescribe—but until the Secretary has promulgated regulations requiring compulsory deposit it is not compulsory.

The CHAIRMAN. You say you are figuring on the 20 per cent additional for the enlisted men on foreign service on the same basis as the officers; that is, 70 per cent?

Lieut. BRETT. Yes, sir.

The CHAIRMAN. The next item is, "For pay of one computer for Artillery Board, \$2,500." That is statutory?

Lieut. BRETT. Yes, sir.

The CHAIRMAN. The next item is, "For payment of exchange by acting quartermasters serving in foreign countries and when specially authorized by the Secretary of War by officers disbursing funds pertaining to the Quartermaster Corps when serving in Alaska, and all foreign money received shall be charged to and paid out by disbursing officers of the Quartermaster Corps at the legal valuation fixed by the Secretary of the Treasury, \$75,000."

Gen. SHARPE. I would like to submit a letter that I wrote last March addressed to The Adjutant General. [Reading:]

WAR DEPARTMENT,
OFFICE OF THE QUARTERMASTER GENERAL OF THE ARMY,
Washington, March 27, 1917.

No. .011-E-Ad.

From: Quartermaster General.

To: The Adjutant General of the Army.

Subject: Estimates and legislation.

In compliance with instructions of March 20, 1917 (A. G. O. No. 2548726) to submit all requests for legislation through the office of The Adjutant General for the consideration of the Chief of Staff and the Secretary of War, the following proposed legislation is recommended:

* * * * *

4. Payment of exchange.

The regular Army appropriation bill carries from year to year the following provision:

"For payment of exchange by acting quartermasters serving in foreign countries and when specially authorized by the Secretary of War by officers disbursing funds pertaining to the Quartermaster Corps when serving in Alaska, \$600."

The varying cost of exchange in foreign countries, a variance in certain European countries during the present war condition that at times approximates 50 per cent, has made the accounting of funds by acting quartermasters on duty in foreign countries a most perplexing and in some cases expensive matter. Officers of the Navy, to whom the cost of exchange is a much more extensive and important matter than it is to the Army officers, have a provision in regulations that enables them to make use of the circular issued by the Director of the United States Mint as a basis for settlement. This circular, which is published quarterly by the Treasury Department, is issued in pursuance of the provisions of section 25 of the act of August 27, 1894. With the rates of exchange given in this circular legalized, the Government is very properly charged with the loss of exchange and is as properly credited with any gain by exchange. Under this system, in accounting for the proceeds of bills of exchange in their accounts current, quartermasters will credit the United States with the legal United States gold equivalent of the face value of the bills, and credit or debit the United States with the premium or loss on exchange, as the case may be. It is therefore recommended that in the estimates now being prepared an additional amount be allowed for cost of exchange which will be necessary in the event that United States troops see service in foreign countries, and it further recommended that the provision of law allowing for such cost of exchange be amended to read as follows:

"For payment of exchange by acting quartermasters serving in foreign countries and when specially authorized by the Secretary of War by officers disbursing funds pertaining to the Quartermaster Corps when serving in Alaska, \$——; and all foreign money received shall be charged to and paid out by disbursing officers of the Quartermaster Corps at the legal valuation fixed by the Secretary of the Treasury, and published on the first day of each quarter."

* * * * *

HENRY G. SHARPE,
Quartermaster General.

That was incorporated in the bill of October 6.

It is new matter coming into your bill, and we would like to have the matter continued here, because of the desirability of having a fixed rate of exchange during the period.

Mr. KAHN. You mean the appropriation bill of October 6?

Gen. SHARPE. Yes, sir.

The CHAIRMAN. How much money did they give you in the appropriation bill?

Lieut. BRETT. In the act of May 12 they gave us \$600. That is what we have been having every year.

Mr. KAHN. But they changed the language in the appropriation act of October 6, and you want the new language?

Gen. SHARPE. We want the language the same as it is in the bill, but this is different from the former appropriation bills, and for that reason we would like to explain it to this committee.

Lieut. BRETT. In the act of October 6 you added to the \$600 appropriated in May 12 \$74,400, making a total of \$75,000, which is the amount we ask for here. It is the same amount we have for the current year.

The CHAIRMAN. Here is the language of the act of May 12:

For payment of exchange by acting quartermasters serving in foreign countries and when specially authorized by the Secretary of War by officers disbursing funds pertaining to the Quartermaster Corps when serving in Alaska.

Lieut. BRETT. I will read the language of the act of October 6:

For payment of exchange by acting quartermasters serving in foreign countries and when specially authorized by the Secretary of War by officers disbursing funds pertaining to the Quartermaster Corps when serving in Alaska, and all foreign money received shall be charged to and paid out by disbursing officers of the Quartermaster Corps at the legal valuation fixed by the Secretary of the Treasury.

This is the language in the present bill and is the language we want.

The CHAIRMAN. The next item is, "For additional pay to officers below the grade of major required to be mounted and who furnish their own mounts, \$400,000."

Lieut. BRETT. Under the law officers owning two mounts get \$200 a year in addition to their pay, and those owning one mount get \$150, and this is the appropriation to carry that out.

Mr. KAHN. How many officers do you figure on as getting this additional amount?

Lieut. BRETT. The last figure we had in regard to officers owning two mounts was that they slightly exceeded in number those owning one mount. I suppose this would cover practically 2,200 officers.

Mr. KAHN. Can you put into the hearings the exact number of officers you are asking this appropriation for?

Lieut. BRETT. It would take our entire force probably working five days to get that information.

Mr. KAHN. Then I do not want it.

Gen. SHARPE. Mr. Kahn, I do not believe that, with the exception of such officers as own their own mounts now in the service, there would be a very large payment out of that sum, because the Government is furnishing mounts now for all officers. We tried to stop the sending of privately owned mounts to Europe, because they get in the corral and you can not find them.

Mr. KAHN. Why, then, should there be this appropriation of \$400,000 if the Government is furnishing the mounts?

Gen. SHARPE. It might be cut down. There ought to be some amount left there, but, frankly, I do not think there would be a very large amount expended.

Lieut. BRETT. In the fiscal year 1917 we disbursed \$206,991.21.

Mr. KAHN. But the condition has altered.

Gen. SHARPE. The officers in this country who own their horses will not want them sent over there. Take, for instance, the Cavalry and the Light Artillery, they are the ones who own their horses. There

ought to be some amount left there, but it will not require all of that.

The CHAIRMAN. The next three items are personal items which have been carried in the bill for years. There used to be a provision in the bill for the mother of Maj. Carroll. Is she dead?

Lieut. BRETT. The bill provided that the Secretary of the Treasury should pay that. We do not pay it, therefore we do not ask for it. The language was unlike the language carried in here, and it provided that \$50 a month was to be paid by the Secretary of the Treasury. That is being paid.

Mr. KAHN. It is being paid?

Lieut. BRETT. Yes, sir.

Mr. KAHN. Did we appropriate for that much?

Lieut. BRETT. You put it into law, but you did not carry it in the appropriation.

The CHAIRMAN. I thought we put it in the appropriation bill because I remember having to ask somebody not to make a point of order on it.

Lieut. BRETT. It was not this appropriation bill.

The CHAIRMAN. I see it is in the last appropriation bill; the Secretary of the Treasury is authorized to pay that amount.

Mr. DAVIDSON. I would like to know what those items are for?

Gen. SHARPE. These ladies are the widows of officers of the Medical Department who lost their lives in Cuba while experimenting with yellow fever there.

Mr. DAVIDSON. I wonder why the better policy would not be to pension them directly, instead of carrying these amounts in an appropriation bill of this kind.

Mr. KAHN. What they did was considered of such valuable assistance to medical science, that it was put in this bill.

Mr. DAVIDSON. I remember the circumstances, and I heartily approve of it.

Mr. ANTHONY. Has the War Department any knowledge of the present physical condition of John R. Kissinger?

Gen. SHARPE. No; we have no report about him.

Lieut. BRETT. The last we heard he was completely disabled; that was not recently.

Mr. ANTHONY. I heard a report that he had largely recovered.

Lieut. BRETT. I will ascertain what can be learned and put it in the record.

(The following correspondence is inserted in the record:)

WAR DEPARTMENT.
OFFICE OF THE QUARTERMASTER GENERAL OF THE ARMY.
Washington, January 15, 1918.

No. 111-1006-A-E.

From: Acting Quartermaster General.

To: The Surgeon General.

Subject: Data for hearings. 1919 estimate.

1. On the 11th instant letter was addressed to the Surgeon General the fourth paragraph of which reads:

"What is the physical condition of John R. Kissinger, now drawing \$100 per month, as provided in the act approved February 15, 1911 (36 Stat., 1919), which reads—

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of War be, and he is hereby, authorized and directed to place on the rolls of the War Department

the name of John R. Kissinger, late of Company D, One hundred and fifty-seventh Regiment Indiana Volunteer Infantry, and also late of the Hospital Corps, United States Army, and to pay to him for and during his natural life, in lieu of all pensions, the sum of \$100 per month, in special recognition of the eminent service rendered, suffering endured, and permanent disabilities contracted by him in the interest of humanity and science as a volunteer subject for experiment in the yellow-fever hospital in Cuba.' "

2. In reply the Surgeon General states:

"The records of the physical condition of officers and enlisted men for the current year are kept in the office of The Adjutant General."

3. It will be noted that John R. Kissinger is neither an officer nor an enlisted man, and inasmuch as his disability was incurred in connection with the Medical Corps of the Army it is believed that any information pertaining to his physical condition at the present time, if it exists in the War Department, would be in the knowledge of the officers of the Medical Department. If no information exists there, please refer this paper to The Adjutant General of the Army.

4. Please expedite.

GEO. W. GOETHALS,
Acting Quartermaster General.

[First Indorsement.]

WAR DEPARTMENT,
SURGEON GENERAL'S OFFICE,
January 17, 1918.

TO THE ADJUTANT GENERAL OF THE ARMY:

1. This office has no information as to present physical condition of John R. Kissinger. It is believed his disability is of permanent nature.

For the Surgeon General.

ROBT. E. NOBLE,
Lieutenant Colonel, Medical Corps.

[Second Indorsement.]

THE ADJUTANT GENERAL'S OFFICE,
January 21, 1918.

TO THE QUARTERMASTER GENERAL:

The records of this office afford no information on the subject of inquiry.
By order of the Secretary of War.

HENRY C. CABELL, *Adjutant General.*

The CHAIRMAN. The last item under pay of the Army is, "Philippine Scouts: 52 captains at \$2,400 each per annum, \$124,800.

"Sixty-five first lieutenants, at \$2,000 each per annum, \$130,000.

"Sixty-five second lieutenants, at \$1,700 each per annum, \$110,500.

"For pay of 13 majors in addition to pay as captain, at \$600 each per annum, \$7,800. \$373,100.

"Additional pay for length of service, \$91,225.24.

"For pay of enlisted men, \$620,000.

"Additional pay for length of service, \$40,766.22."

Lieut. BRETT. I do not think there is any change in that, Mr. Chairman, except in the item for length of service.

The CHAIRMAN. There is no change as far as the total is concerned.

Lieut. BRETT. The number of officers would remain the same, and their salaries are statutory. Of course, there is a slight decrease in service pay.

Mr. KAHN. If this bill which we passed the other day creating a division of the Army for the Philippine Islands becomes a law and those men are called into the actual service of the United States, then they will get the same pay as the Regular Army officers and enlisted

men receive. So, in figuring on this item, we will have to take that into consideration.

Mr. ANTHONY. Was it not intended to keep up the Scout organization just the same?

The CHAIRMAN. They were to be called into the service.

Mr. ANTHONY. I understood they were to be retained in the Army.

The CHAIRMAN. They were to be taken as they are and then sent separately to the National Guard.

These two provisions at the end of the items for pay of the Army have been carried in the bill for years, have they not?

Gen. SHARPE. Yes, sir.

The CHAIRMAN. Has the item "For reimbursements of officers of the Army pertaining to the United States troops serving in the Canal Zone all amounts of rent actually paid by them for occupancy of houses of the Panama Canal while stationed in the Canal Zone, for periods for which they received no commutation of quarters and for periods for which, having received commutation of quarters, they have been and may be required to refund the same, \$2,458.83," been carried in the bill heretofore?

Gen. SHARPE. That is a new item, and was put in by direction of the Secretary of War. The record leading up to the submission of the item of legislation is as follows:

HEADQUARTERS UNITED STATES TROOPS,
PANAMA CANAL ZONE,
Ancon, Canal Zone, December 4, 1916.

From: The Commanding General.

To: The Adjutant General of the Army.

Subject: Legislation required for the Canal Zone.

1. In accordance with your radiogram of the 11th ultimo I submit recommendations for legislation for the Canal Zone. I briefly outline the bills desired and submit texts of drafts and arguments as appendices. Other projects have heretofore been submitted.

* * * * *

C. Certain credits to disbursing quartermaster.

* * * * *

Very respectfully,

C. R. EDWARDS,
Brigadier General.

HEADQUARTERS, EASTERN DEPARTMENT,
December 20, 1916.

To THE ADJUTANT GENERAL OF THE ARMY.

* * * * *

C. Approved and strongly recommended. The quarters situation at Panama has been one embodying hardship and, in my opinion, marked injustice toward officers of the Army.

* * * * *

LEONARD WOOD,
Major General Commanding.

[Third indorsement.]

WAR DEPARTMENT,
ADJUTANT GENERAL'S OFFICE,
June 8, 1917.

To THE JUDGE ADVOCATE GENERAL—

Who will submit, as soon as practicable * * * draft of legislation that will procure reimbursement to officers of the Army pertaining to the United States troops serving in the Canal Zone of amounts of rent actually paid by them for houses of the Panama Canal, while stationed in the Canal Zone, for

periods for which they received no commutation of quarters, and for periods for which, having received commutation of quarters they have been required to refund same.

By order of the Secretary of War:

EDWARD T. DONNELLY,
Adjutant General.

[Fourth indorsement.]

WAR DEPARTMENT,
JUDGE ADJUTANT GENERAL'S OFFICE,
June 19, 1917.

To THE ADJUTANT GENERAL.

(b) With respect to the reimbursement of officers for rent actually paid by them for occupancy of houses of the Panama Canal while stationed in the Canal Zone, I submit the following draft:

"For reimbursement of officers of the Army pertaining to the United States troops serving in the Canal Zone all amounts of rent actually paid by them for occupancy of houses of the Panama Canal while stationed in the Canal Zone for periods for which they received no commutation of quarters and for periods for which, having received commutation of quarters, they have been and may be required to refund the same, ——— dollars: *Provided*, That hereafter officers of the Army pertaining to the United States troops serving in the Canal Zone shall not be required to pay rent for the occupancy of houses of the Panama Canal to which they may be assigned."

BLANTON WINSHIP,
Acting Judge Advocate General.

[Fifth indorsement.]

WAR DEPARTMENT, ADJUTANT GENERAL'S OFFICE,
July 4, 1917.

To the CHIEF OF OFFICE,

Washington Office the Panama Canal, Washington, D. C.:

The return of these papers through the Quartermaster General is desired for the purpose of having the Quartermaster General insert in any appropriate legislation to be presented to Congress the draft of the first proviso recommended in paragraph (b) of the preceding indorsement hereon.

By order of the Secretary of War:

J. F. DEAN, *Adjutant General.*

When I reached the canal I established my headquarters at Ancon, Canal Zone. Shortly thereafter staff officers began to arrive. There were no quarters. Many officers lived at the Tivoli Hotel until quarters were built. Others, finding the rates at the Tivoli prohibitive considering the presence of their families, made arrangements to live in the houses of the Panama Canal employees during the absence on leave of such employees, paying rent therefor to the Panama Canal. My two aides finally secured one room each in a small house in rear of and connected with the Tivoli Hotel. The rent paid here was less than for a room in the hotel, but the miserable place was not appropriate to their position.

The auditor holds, and is upheld by the comptroller, that payment of commutation to officers while occupying Panama Canal quarters, though rent was paid, is illegal, and the officers have been directed to return the amount paid to them as commutation of quarters. However, no return was directed from those who occupied regular rooms at the hotel.

There was no authority to pay the rent in the above cases because the officers were on duty without troops. The payment of commutation seemed the only way to meet the conditions. There has been no attempt to beat the Government in any way. The decision has, in my opinion, not been based upon conditions but rather upon a theory.

CLARENCE R. EDWARDS,
Commanding General United States Troops,
Ancon, Canal Zone.

This was submitted by Gen. Edwards. When he reached the Canal Zone he established headquarters at Ancon, and he found that

several officers did not have quarters, and there were no quarters for them, and many of them lived at the Tivoli Hotel until quarters were built, and others found the rates there prohibitive, and they finally secured one room.

This item is to reimburse these officers because of that decision. We have the names of the officers, if you desire them. This is to remove the suspension from the disbursing officer. They have already paid it. There were three disbursing officers concerned, and the amount to be appropriated is \$2,458.83.

Mr. KAHN. Gen. Goethals used to be the governor of the Panama Canal Zone, and he says he thinks the money ought to be paid to the Canal Zone.

Gen. GOETHALS. The situation is this: The Army came down there, and we turned over all the Canal Zone buildings on the west side of the canal to the Army, and Gen. Edwards located his headquarters at Ancon, with quite a considerable staff. They found living at the Tivoli Hotel rather expensive, and they wanted quarters. The Canal Zone government is put to a certain expense for care of quarters, and we crowded in our own people and made room for the Army in various buildings and charged them for the actual cost of caring for those rooms, for janitor service, and light, and the officers drew their commutation of quarters.

The comptroller got hold of it, and he stopped the commutation of quarters, but we still charged them for this service, which is relatively small, but which amounts to something. This item is for the purpose of giving them commutation of quarters or money and will take them out of the Canal Zone buildings.

We incommoded ourselves to provide for the officers, and we ought to have the quarters back, and the officers ought to have commutation of quarters, or the Canal Zone government ought to be reimbursed for the janitor service. Our employees are paying for the janitor service. I do not see why the Army should not do the same thing.

Mr. KAHN. The Canal Zone employees are being charged for this service?

Gen. GOETHALS. They were. I do not know what the regulations are now, but the regulations required them to pay for the service, for the light and janitor service; that is, the bachelors. The married men were furnished no commutation of quarters and were charged with light and fuel.

Mr. KAHN. So that, in your opinion, if this money is paid back at all, it should be paid to the Canal Zone employees?

Gen. GOETHALS. To the Canal Zone.

Gen. SHARPE. The first proviso is to give credit to the disbursing officers who paid the money. The last part of it provides for payment. It divides itself into two parts.

Mr. ANTHONY. Evidently the officers paid the amounts of the rents. Did not those amounts go to the Canal Zone?

Gen. GOETHALS. They did. The Canal Zone got that amount and the officers took commutation of quarters.

Mr. ANTHONY. So that if we provide for the money being paid to the Canal Zone, it would have been paid twice, would it not?

Gen. GOETHALS. No; it passes to the credit of the disbursing officer. The amount of money has already been paid. This will merely clear

up the accounts of the accounting officer. There is no money passed. The Canal Zone has already got its pay. The other provision requiring us to turn over the quarters is another matter. I do not know the situation in regard to the quarters. There is an item for additional barracks and quarters for officers and that would solve it. I know we did inconvenience ourselves for the officers who could not afford the Tivoli Hotel rates.

(Thereupon the committee adjourned to meet to-morrow, Wednesday, January 9, 1918, at 10.30 o'clock a. m.)

NOTE.—After adjournment.

The CHAIRMAN. General, there is one question I would like to ask before proceeding further with the items of the bill: Will you put into the record the total extra cost of the pay of the Army on account of the increase in the pay that was made at the last session of Congress?

Gen. SHARPE. Yes, sir.

The CHAIRMAN. Can you tell me now about what the figures are?

Gen. SHARPE. I have not that information now.

The information desired appears in the pay notes section.

ARMY APPROPRIATION BILL, 1919.

COMMITTEE OF MILITARY AFFAIRS,
HOUSE OF REPRESENTATIVES,
Wednesday, January 9, 1918.

The committee met at 10.30 o'clock a. m., Hon. S. Hubert Dent (chairman) presiding.

STATEMENTS OF MAJ. GEN. HENRY G. SHARPE, QUARTERMASTER GENERAL, AND MAJ. GEN. GEORGE W. GOETHALS, ACTING QUARTERMASTER GENERAL, ACCOMPANIED BY LIEUT. COL. GROVE, AND CAPT. CHARLES P. DALY, QUARTERMASTER CORPS—Resumed.

The CHAIRMAN. General, there is one other question I would like to ask you before we pass to the next item. Will you put into the record the total extra cost of the pay of the Army on account of the increase in the pay that was made at the last session of Congress?

Gen. SHARPE. Yes, sir.

The CHAIRMAN. Can you tell me now about what the figures are?

Gen. SHARPE. I have not that information now. The information desired appears in the pay notes section.

SUPPLIES, SERVICES, AND TRANSPORTATION, QUARTERMASTER CORPS (SUBSISTENCE).

The CHAIRMAN. The next item is under the general heading "Supplies, services, and transportation, Quartermaster Corps," and the first item is "Subsistence of the Army: Purchase of subsistence supplies," and the amount is \$298,405,655.57. At the last session, Congress gave you \$401,500,000. Now you are asking for \$298,405,655.57.

Gen. SHARPE. The amount appropriated by Congress was in three bills, the regular Army appropriation bill for the fiscal year 1918, the act of May 12, under which we got \$18,500,000. In the deficiency act of June 15 we got \$133,000,000, and in the deficiency act of October 6 we got \$250,000,000, making a total of \$401,500,000. This year the appropriation asked for amounts to \$298,405,655.57.

The CHAIRMAN. That is based on an army of 1,612,245 men?

Gen. SHARPE. Yes, sir.

The CHAIRMAN. With this item, as with the other items, will you put in the hearings a statement showing the increase required for each additional increment of 500,000 men?

Gen. SHARPE. Yes, sir.

Capt. DALY. It would be \$152.21 per capita.

Gen. SHARPE. I would like to submit a table giving the amounts required under each item of the bill.

The CHAIRMAN. We will be glad to have that.
Gen. SHARPE. Then the notes explain each item in detail.
(The statement above referred to and the details of the estimate are as follows:)

SUBSISTENCE OF THE ARMY.

Estimate, 1919.....	\$298, 405, 655. 57
Appropriated, 1918.....	\$18, 500, 000. 00
Urgent deficiency, 1918.....	250, 000, 000. 00
	<hr/> 268, 500, 000. 00
Increase, 1919.....	29, 905, 655. 57

NOTE.—The deficiency act for 1917, for \$133,000,000, is available for expenditures for the fiscal year 1918.

Item No.	Purpose.	Estimated current requirements, fiscal year 1919.	Estimate per capita, 1,617,245 men.
101a	Purchase of subsistence supplies for issue as rations to troops.....	\$268, 850, 537. 02	\$133. 79
101b	Purchase of subsistence supplies for issue as rations to civil employees..	268, 349. 42	. 978
101c	Purchase of subsistence supplies for issue as rations to hospital matrons.....	4, 398. 62	. 0027
101f	Purchase of subsistence supplies for issue as rations to general prisoners of war.....	2, 147, 990. 32	1. 33
101i	Purchase of subsistence supplies for issue as rations to general prisoners at posts.....	6, 091. 788. 54	3. 77
102a	For the subsistence of the masters of the vessels of the Army Transport Service.....	5, 476. 25	. 0033
102b	For the subsistence of the officers of the vessels of the Army Transport Service.....	67, 713. 25	. 0419
102c	For the subsistence of the crews of the vessels of the Army Transport Service.....	296, 899. 90	. 183
102d	For the subsistence of the employees of the vessels of the Army Transport Service.....	7, 208. 75	. 0044
103	Hot coffee for troops traveling when supplied with cooked or travel rations.....	170, 009. 70	. 105
104a	Meals for recruiting parties.....	657, 000. 00	. 408
104b	Meals for applicants for enlistment while held under observation....	574, 875. 00	. 357
107a	For payments of commutation of rations to cadets at the United States Military Academy.....	146, 000. 00	. 09
107b	For payment of commutation of rations to enlisted men on furlough..	3, 285, 000. 00	2. 037
107c	For payment of commutation of rations to enlisted men stationed at places where rations in kind can not be economically issued, and when traveling on detached duty when it is impracticable to carry rations of any kind.....	6, 251, 282. 60	3. 57
107d	For payment of commutation of rations to male and female nurses when stationed at places where rations in kind can not be economically issued, and when traveling on detached duty when it is impracticable to carry rations of any kind.....	2, 623, 620. 00	1. 63
107f	For payment of commutation of rations to male and female nurses on leave of absence.....	133, 371. 00	. 0827
107g	For payment of commutation of rations to applicants for enlistment while traveling under orders.....	55, 188. 00	. 034
107h	For payment of commutation of rations to general prisoners while traveling under orders.....	274, 626. 00	. 17
107i	For payment of commutation of rations to members of the Nurse Corps (female) while on duty in hospitals.....	39, 420. 00	. 0244
107j	For payment of commutation of rations to enlisted men sick in hospital.....	5, 916, 905. 50	3. 68
107k	For payment of commutation of rations to applicants for enlistment while held under observation.....	12, 264. 00	. 0076
107l	For payment of commutation of rations to general prisoners sick in hospitals.....	122, 056. 00	. 075
108	Advertising.....	18, 845. 00	. 0116
109	For providing prizes to be established by the Secretary of War for enlisted men of the Army who graduate from the Army schools for bakers and cooks.....	900. 00	.....
110	Other necessary expenses incident to the purchase, testing, care, preservation, issue, sale, and accounting for subsistence supplies for the Army.....	250, 000. 00	. 155
110a	Customs duties on subsistence supplies.....	50, 000. 00	. 031
110b	Losses on subsistence stores.....	73, 921. 30	. 046
110c	Hire of employees.....	10, 100. 00	. 0063
	Total.....	298, 405, 655. 57	152. 21

[Estimate, fiscal year 1919.]

101a. Purchase of subsistence supplies for issue as rations to troops..	\$268, 850, 537. 02
101b. Purchase of subsistence supplies for issue as rations to civilian employees.....	268, 349. 42
101c. Purchase of subsistence supplies for issue as rations to hospital matrons.....	4, 398. 62
101f. Purchase of subsistence supplies for issue as rations to general prisoners of war.....	2, 147, 990. 32
101i. Purchase of subsistence supplies for issue as rations to general prisoners at posts.....	6, 091, 788. 54
102a. For the subsistence of the masters of the vessels of the Army Transport Service.....	5, 476. 25
102b. For the subsistence of the officers of the vessels of the Army Transport Service.....	67, 713. 25
102c. For the subsistence of the crews of the vessels of the Army Transport Service.....	296, 809. 90
102d. For the subsistence of the employees of the vessels of the Army Transport Service.....	7, 208. 75
103. Hot coffee for troops traveling when supplied with cooked or travel rations.....	170, 009. 70
104a. Meals for recruiting parties.....	657, 000. 00
104b. Meals for applicants for enlistment while under observation..	574, 875. 00
107a. Payment of commutation of rations to the cadets at the United States Military Academy.....	146, 000. 00
107b. For payment of commutation of rations to enlisted men on furlough.....	3, 285, 000. 00
107c. For payment of commutation of rations to enlisted men stationed at places where rations in kind can not be economically issued, and when traveling on detached duty, when it is impracticable to carry rations of any kind.....	6, 251, 282. 00
107d. For payment of commutation of rations to male and female nurses when stationed at places where rations in kind can not economically be issued, and when traveling on detached duty, when it is impracticable to carry rations of any kind.....	2, 623, 620. 00
107f. For payment of commutation of rations to male and female nurses on leave of absence.....	133, 371. 00
107g. For payment of commutation of rations to applicants for enlistment while traveling under orders.....	55, 188. 00
107h. For payment of commutation of rations to general prisoners while traveling under orders.....	274, 626. 00
107i. For payment of commutation of rations to members of the Nurse Corps (female) while on duty in hospitals.....	39, 420. 00
107j. For payment of commutation of rations to enlisted men sick in hospitals.....	5, 916, 905. 50
107k. For payment of commutation of rations to applicants for enlistment while held under observation.....	12, 264. 00
107-1. For payment of commutation of rations to general prisoners sick in hospitals.....	122, 056. 00
108. Advertising.....	18, 845. 00
109. For providing prizes to be established by the Secretary of War for enlisted men of the Army who graduate from the Army schools for bakers and cooks.....	900. 00
110. Other necessary expenses incident to the purchase, testing, care, preservation, issue, sale, and accounting for subsistence supplies for the Army.....	250, 000. 00
110a. Customs duties on subsistence supplies.....	50, 000. 00
110b. Losses on subsistence stores.....	73, 921. 30
110c. Hire of employees.....	10, 100. 00
Total.....	298, 405, 655. 57

Item 101a.—Purchase of subsistence supplies for issue as rations to troops: Estimated, 1919, \$268,850,537.02.

Number of enlisted men for whom it is estimated rations will be issued.	Number of days for which it is estimated rations will be issued.	Estimated cost per ration.	Total.
1,470,079.....	365	\$0. 4017	\$215, 543, 718.02
4,203.....	365	. 2000	306, 819.00
1,474,282.....			215, 850, 537.02
Reserve.....			53, 000, 000.00
Total estimate.....			268, 850, 537.00

Based on the increase in prices for the fiscal year 1918, over prices for the fiscal year 1917, it is estimated that approximately \$53,000,000 will be required to cover the probable increase in cost of subsistence supplies for issue as rations to troops (item 101a) for the fiscal year 1919, which amount has been included in this estimate.

Item 101b.—Purchase of subsistence supplies for issue as rations to civil employees: Estimated, 1919, \$268,349.42.

Number of civilians for whom it is estimated rations will be issued.	Number of days for which it is estimated rations will be issued.	Estimated cost per ration.	Total.
1,767	365	\$0. 4017	\$259,078. 42
52	365	. 20	3, 798.00
150	365	. 10	5, 475. 00
1,969	.....	.....	268, 349. 42

Item 101c.—Purchase of subsistence supplies for issue as rations to hospital matrons: Estimated, 1919, \$4,398.62.

Number of hospital matrons for whom it is estimated rations will be issued..	30
Days for which it is estimated rations will be issued.....	365
Estimated cost per ration.....	\$0. 4017
Total estimate.....	\$4, 398. 62

Item 101d.—Purchase of subsistence supplies for issue as rations to nurses: No estimate is submitted under this item, as all nurses receive commutation of rations. See remarks under item 107i.

Item 101e.—Purchase of subsistence supplies for issue as rations to applicants for enlistment while held under observations: No estimate is submitted under this item, as the amount is negligible, and if any rations are required they can be supplied under item 101a.

Item 101f.—Purchase of subsistence supplies for issue as rations to general prisoners of war: Estimated, 1919, \$2,147,990.32.

Number of prisoners of war for whom it is estimated rations will be issued.....	14, 650
Days for which it is estimated rations will be issued.....	365
Estimated cost per ration.....	\$0. 4017
Total estimate.....	\$2, 147, 990. 32

Item 101g.—Purchase of subsistence supplies for issue as rations to Indians held by the Army as prisoners, but for whose subsistence appropriation is not otherwise made: No estimate is submitted under this item, as Indians held as prisoners formerly rationed by the Army are now furnished rations by the Department of the Interior.

Item 101h.—Purchase of subsistence supplies for issue as rations to Indians employed with the Army as guides and scouts. No estimate is submitted under this item, as there are no Indians employed with the Army. There are 75 Indians enlisted, who are included in the line of the Army, under item 101a.

Item 101i.—Purchase of subsistence supplies for issue as rations to general prisoners at posts: Estimated, 1919, \$6,091,788.54.

Number of general prisoners for whom it is estimated rations will be issued.....	41, 548
Days for which it is estimated rations will be issued.....	365
Estimated cost per ration.....	\$0. 4017
Total estimate.....	\$6, 091, 788. 54

Items 102 and subitems.—For the subsistence of the masters, officers, crews, and employees of the vessels of the Army transport service: Estimated, 1919, \$388,961.15. For details under this item, see remarks under items 102a, 102b, 102c, and 102d.

Item 102a.—For the subsistence of the masters of the vessels of the Army transport service: Estimated, 1919, \$5,476.25.

Number of masters for whom it is estimated rations will be issued.	Number of days for which it is estimated rations will be issued.	Estimated cost per ration.	Total estimate.
11	365	\$1. 25	\$5, 018. 75
2	183	1. 25	457. 50
13	.....	.....	5, 476. 25

Tables to accompany item 102a, subsistence of the Army.

Vessel.	Quartermaster agent. ¹	Clerk. ¹	Freight clerks. ²	Master. ¹	First officers. ¹	Second officers. ²	Third officers. ²	Fourth officers. ²	Checkers. ²
Logan.....	1	1	1	1	1	1	1	1	.....
Sherman.....	1	1	1	1	1	1	1	1	.....
Thomas.....	1	1	1	1	1	1	1	1	.....
Sheridan.....	1	1	1	1	1	1	1	1	.....
Dix.....	1	.....	1	1	1	1	1	1	.....
Burnside.....	1	.....	.....	1	1	1	1	1	.....
Kilpatrick.....	1	1	1	1	1	1	1	1	.....
Total.....	7	5	6	7	7	7	7	7	.....
Gen. Davis.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Gen. Jacobs.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Total.....	.....	.....	2	.....	.....	.....	.....	.....	.....
El Aguila.....	.....	.....	.....	1	1	1	.....	.....	.....
Liscum.....	1	.....	1	1	1	1	2	1	1
Merritt.....	1	1	1	1	1	1	1	1	.....
Warren.....	1	1	1	1	1	1	1	1	.....
Total.....	3	2	3	4	4	4	4	3	1

Vessel.	Yeoman. ³	Carpenters. ³	Boatswains. ³	Boatswains' mates. ³	Storekeepers. ³	Master at arms. ³	Wheelmen. ³	Seamen. ⁴	Chief engineer. ¹
Logan.....	1	1	1	1	3	2	5	25	1
Sherman.....	1	1	1	1	3	2	5	25	1
Thomas.....	1	1	1	1	3	2	5	25	1
Sheridan.....	1	1	1	1	3	2	5	25	1
Dix.....	1	1	1	1	2	.....	4	15	1
Burnside.....	1	1	1	.....	2	1	4	13	1
Kilpatrick.....	.....	1	1	1	3	2	4	24	1
Total.....	6	7	7	6	18	11	32	152	7
Gen. Davis.....	.....	1	.....	.....	.....	.....	.....	.....	1
Gen. Jacobs.....	.....	1	.....	.....	.....	.....	.....	.....	1
Total.....	.....	2	.....	.....	.....	.....	.....	.....	2
El Aguila.....	.....	1	1	.....	.....	.....	4	10	1
Liscum.....	.....	1	1	1	1	.....	4	26	1
Merritt.....	.....	1	1	1	2	.....	4	26	1
Warren.....	.....	1	1	1	1	1	5	36	1
Total.....	.....	4	4	3	4	1	17	98	4

¹ Saloon mess, \$1.25 per day.

² Ship's officers' mess, \$1 per day.

³ Petty officers' mess, 70 cents per day.

⁴ Sailors' and firemen's mess 70 cents per day.

Tables to accompany item 102a, subsistence of the Army.

Vessel.	First assistant engineer. ¹	Second assistant engineer. ²	Third assistant engineer. ²	Fourth assistant engineer. ²	Deck engineer. ²	Refrigerating engineer. ²	Assistant refrigerator engineer. ²	Electrician. ²	Assistant electrician. ²
Logan.....	1	2	3	.....	1	1	1	1	1
Sherman.....	1	2	3	.....	1	1	1	1	1
Thomas.....	1	2	3	.....	1	1	1	1	1
Sheridan.....	1	2	3	.....	1	1	1	1	1
Dix.....	1	1	2	.....	.....	1	.....	1	.....
Burnside.....	1	1	2	.....	.....	1	1	1	.....
Kilpatrick.....	1	1	1	.....	1	1	1	1	1
Total.....	7	11	17	.....	5	7	6	7	5
Gen. Davis.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Gen. Jacobs.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	2	.....	.....	.....	.....	.....	.....	.....	.....
El Aguila.....	1	1	.....	.....	.....	.....	.....	.....	.....
Liscum.....	1	1	1	1	1	1	1	1	.....
Merritt.....	1	1	1	1	.....	1	1	1	.....
Warren.....	1	1	1	1	1	1	1	1	.....
Total.....	4	4	3	3	2	3	3	3	.....

¹ Saloon mess, \$1.25 per day.² Ship's officers' mess, \$1 per day.

Item 102-b.—For the subsistence of the officers of the vessels of the Army transport service, estimated, 1919, \$67,713.25.

Number of officers for whom it is estimated rations will be issued.	Number of days for which it is estimated rations will be issued.	Estimated cost per ration.	Total estimate.
51	365	\$1.25	\$23,268.75
6	183	1.25	1,372.50
116	365	1.00	42,340.00
4	183	1.00	732.00
177	.....	.....	67,713.25

Table to accompany item 102b.

Vessel.	Plumbers. ¹	Water tenders. ²	Firemen. ²	Coal passers. ²	Oilers. ²	Chief steward. ⁴	Second steward. ²	Second cabin stewards. ²	Stewardesses. ²	First assistant storekeepers. ²
Logan.....	1	3	20	18	6	1	1	1	1	1
Sherman.....	1	3	20	18	6	1	1	1	1	1
Thomas.....	1	3	20	18	6	1	1	1	1	1
Sheridan.....	1	3	20	18	6	1	1	1	1	1
Dix.....	.....	3	12	12	3	1	.....	.....	.....	.....
Burnside.....	1	.....	4	3	6	1	1	.....	.....	.....
Kilpatrick.....	1	3	15	12	3	1	1	.....	1	.....
Total.....	6	18	111	99	36	7	6	4	5	6
Gen. Davis.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....
Gen. Jacobs.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	.....	6	.....	.....	.....	.....	.....	.....	.....
El Aguila.....	.....	.....	6	3	4	.....	.....	.....	.....	.....
Liscum.....	1	.....	15	12	6	1	1	.....	.....	.....
Merritt.....	1	3	12	6	6	.....	.....	.....	.....	.....
Warren.....	1	3	12	15	6	.....	.....	.....	.....	.....
Total.....	3	6	45	36	22	1	1	.....	.....	.....

¹ Ship's officers' mess \$1 per day.² Petty officers' mess 70 cents per day.³ Sailors' and firemen's mess, 70 cents per day.⁴ Saloon mess, \$1.25 per day.

Table to accompany item 102b.

Vessel.	Second assistant storekeepers. ¹	Stewards' yeo- men. ¹	Chief cook. ¹	Second cooks. ¹	Third cooks. ¹	Fourth cooks. ¹	Fifth cooks. ¹	Scullions. ¹	Chief bakers. ¹	Second bakers. ¹
Logan.....	1	1	1	1	1	1	1	2	1	1
Sherman.....	1	1	1	1	1	1	1	2	1	1
Thomas.....	1	1	1	1	1	1	1	2	1	1
Sheridan.....	1	1	1	1	1	1	1	2	1	1
Dix.....			1	1	1			1	1	1
Burnside.....			1	1					1	
Kilpatrick.....			1	1	1			2	1	1
Total.....	4	4	7	7	6	4	4	11	7	6
General Davis.....			1	1						
General Jacobs.....			1	1						
			2	2						
Liscum.....			1	1				1	1	

	Third bakers. ¹	Fourth bakers. ¹	Chief butchers. ¹	Second butch- ers. ¹	Third butchers. ¹	Chief Army cooks. ¹	Second Army cooks. ¹	Third Army cooks. ¹	Fourth Army cooks. ¹	Ship's cooks. ¹	First pantry- men. ¹
Logan.....	1	1	1	1	1	1	1	1	1	1	1
Sherman.....	1	1	1	1	1	1	1	1	1	1	1
Thomas.....	1	1	1	1	1	1	1	1	1	1	1
Sheridan.....	1	1	1	1	1	1	1	1	1	1	1
Dix.....			1								
Burnside.....			1							1	1
Kilpatrick.....	1		1	1	1	1	1	1		1	1
Total.....	5	4	7	5	5	5	5	5	4	6	6
Liscum.....			1			1				1	1

¹ Petty officers' mess, 70 cents per day.

Item 102c.—For the subsistence of the crews of the vessels of the Army transport service: Estimated, 1919, \$296,809.90.

Number of crews for whom it is estimated rations will be issued.	Number of days for which it is estimated rations will be issued.	Estimated cost per ration.	Total estimate.
5	365	\$1.00	\$1,825.00
600	365	.70	153,300.00
12	183	.70	1,537.20
540	365	.70	137,970.00
17	183	.70	2,177.70
1,220			296,809.90

Table to accompany item 102c.

Vessel.	Second pantry-men. ¹	Third pantry-men. ¹	Second cabin pantrymen. ¹	Dishwashers.	Porters. ¹	First officers' messmen. ¹	Second officers' messmen. ¹	Petty officers' messmen. ¹	Mess boys. ²
Logan.....	1	1			1	1	1		4
Sherman.....	1	1			1	1	1		4
Thomas.....	1	1			1	1	1		4
Sheridan.....	1	1			1	1	1		4
Dix.....						1			
Burnside.....						1	1		2
Kilpatrick.....	1	1			1	2		2	4
Total.....	5	5	4	3	5	9	5	12	22
Lieut.	1								1

¹ Petty officers' mess, \$0.70 per day.² Sailors' and firemen's mess, \$0.70 per day.

Vessel.	Bathroom men. ¹	Walters. ²	Silver men. ³	Janitors. ¹	Bell boys. ¹	Night watch-men. ¹	Barbers. ¹	Third stewards. ¹	Veterinarians. ³
Logan.....	1	18	1	1	2	1	1	1	
Sherman.....	1	24	1	1	2	1	1	1	
Thomas.....	1	24	1	1	2	1	1	1	
Sheridan.....	1	24	1	1	2	1	1	1	
Dix.....		9				1			1
Burnside.....		6				1			
Kilpatrick.....		18			2	1		1	
Total.....	4	148	4	4	15	7	4	5	1
Gen. Davis.....						1			
Gen. Jacobs.....						1			
Total.....						2			
Lieut.		9							

Vessel.	Deck boys. ⁴	Mechanists. ¹	Assistant plumbers. ¹	Third engineers (junior). ³	Pilots. ⁴	Mates. ³	Second mates. ³	Deck hands. ⁴	Cabin boys. ¹
Dix.....	2		1						
Burnside.....		1	1						
Kilpatrick.....				1					
Total.....	2	1	1	1					
Gen. Davis.....					1	1	1	3	2
Gen. Jacobs.....					1	1	1	5	2
Total.....					2	2	2	11	4
Lieut.	6								

¹ Petty officers' mess, \$0.70 per day.² Walters' mess, \$0.70 per day.³ Ship's officers' mess, \$1 per day.⁴ Sailors and firemen's mess, \$0.70 per day.⁵ Saloon mess, \$1.25 per day.

Item 102d.—For the subsistence of the employees of the vessels of the Army transport service: Estimated, 1919, \$7,208.75.

Number of employees for whom it is estimated rations will be issued.	Number of days for which it is estimated rations will be issued.	Estimated cost per ration.	Total estimate.
7	365	\$1.25	\$3,193.75
10	365	1.00	4,015.00
17	.....	.....	7,208.75

Item 103.—Hot coffee for troops traveling when supplied with cooked or travel rations: Estimated, 1919, \$170,009.70.

Number of enlisted men for whom it is estimated hot coffee will be furnished.....	2,218
Days for which it is estimated hot coffee will be furnished.....	365
Estimated cost per man for the purchase of hot coffee.....	\$0.21
Total estimate.....	\$170,009.70

Item 104a.—Meals for recruiting parties: Estimated, 1919, \$657,000.

Number of enlisted men for whom it is estimated meals will be furnished.....	2,000
Days for which it is estimated meals will be furnished.....	365
Estimated cost per day.....	\$0.90
Total estimate.....	\$657,000.00

Item 104b.—Meals for applicants for enlistment while under observation: Estimated, 1919, \$574,875.

Number of applicants for whom it is estimated meals will be furnished..	1,750
Days for which it is estimated meals will be furnished.....	365
Estimated cost per day.....	\$0.90
Total estimate.....	\$574,875.00

Item 104c.—Meals for enlisted men reporting without means: No estimate is submitted under this item, as the cost for any rations issued to men reporting without means is charged against the man on the muster rolls and deducted from his pay.

Item 105.—Purchase of subsistence supplies for sales: No estimate is submitted for the fiscal year 1919.

Item 105a.—Purchase of subsistence supplies for sales to officers of the Army: Paragraph 1239, Army Regulations, 1913, provides that sales of subsistence stores may be made at cost prices for cash to an officer on his certificate that the stores are for his personal or family use or for the use of an officers' mess, of which he is the caterer. Funds received from such sales are available to replace the stores sold. Authorized by section 1144, Revised Statutes, and act approved March 3, 1875 (18 Stat., 410).

Item 105b.—Purchase of subsistence supplies for sales to enlisted men of the Army: Paragraph 1241, Army Regulations, 1913, provides that sales of reasonable quantities of stores may be made to an enlisted man on the active or retired list, for cash upon his declaration in writing that they are intended for his own use. Funds received from such sales are available to replace the stores sold. Authorized by section 1144, Revised Statutes, and act approved March 3, 1875 (18 Stat. 410).

Item 105c.—Purchase of subsistence supplies for sales to the Navy: Paragraph 1241½, Army Regulations, 1913 (as amended by C. A. R. No. 12, War Department, 1914), provides that officers and enlisted men of the Navy and Marine Corps are permitted to purchase subsistence supplies at the same price as is charged the officers and enlisted men of the Army, and the officers and enlisted men of the Army are permitted to purchase subsistence supplies from the Navy and the Marine Corps at the same price as is charged the officers and enlisted men of the Navy and the Marine Corps. Funds received from such sales are available to replace the stores sold. Authorized by act approved August 29, 1916.

Item 105d.—Purchase of subsistence supplies for sales to the Marine Corps: Paragraph 1241½, Army Regulations, 1913 (as amended by C. A. R. No. 12, War Department, 1914), provides that officers and enlisted men of the Navy and Marine Corps are permitted to purchase subsistence supplies at the same price as is charged the officers and enlisted men of the Army, and the officers and enlisted men of the Army are permitted to purchase subsistence supplies from the Navy and the Marine Corps

at the same price as is charged the officers and enlisted men of the Navy and the Marine Corps. Funds received from such sales are available to replace the stores sold. Authorized by act approved August 29, 1916.

Item 106.—Supplying for competitors in the national rifle match, meals, etc.: This office was advised by Maj. Bookmiller, of The Adjutant General's Office, that by direction of the Secretary of War the national rifle match and contests for places in department and Army rifle teams are suspended until further orders, and no estimate is, therefore, submitted hereunder for the fiscal year 1919.

Item 107 and subitems.—For payments of commutation of rations: For details as to this amount, see remarks under items 107a to 107i, inclusive.

Item 107a.—Payment of commutation of rations to the cadets at the United States Military Academy:

Estimated, 1919.....	\$146,000
Expended, 1917.....	\$107,442.20
Number of cadets for whom it is estimated commutation of rations will be paid.....	1,000
Days for which it is estimated commutation will be paid.....	365
Rate for commutation.....	\$0.40
Total estimate.....	\$146,000

Item 107b.—For payment of commutation of rations to enlisted men on furlough:

Estimated, 1919.....	\$3,285,000
Expended, 1917.....	\$151,514.76
Number of enlisted men for whom it is estimated commutation of rations will be paid.....	30,000
Days for which it is estimated commutation will be paid.....	365
Rate of commutation.....	\$0.30
Total estimate.....	\$3,285,000

Item 107c.—For payment of commutation of rations to enlisted men stationed at places where rations in kind can not be economically issued and when traveling on detached duty, when it is impracticable to carry rations of any kind:

Estimated, 1919.....	\$6,251,282.00
Expended, 1917.....	1,010,550.88

Enlisted men for whom it is estimated commutation will be paid.	Number of days for which it is estimated commutation will be paid.	Estimated rate of commutation.	Total estimate.
4,570	365	\$0.30	\$500,415.00
142	365	.40	20,732.00
1,910	365	.50	348,575.00
420	365	.75	114,975.00
11,316	365	1.00	4,130,340.00
1,268	365	1.12½	527,672.50
70	365	1.25	31,937.50
1,066	365	1.50	583,635.00
20,762	.....	.....	6,251,282.00

Item 107d.—For payment of commutation of rations to male and female nurses when stationed at places where rations can not economically be issued and when traveling on detached duty when it is impracticable to carry rations of any kind:

Estimated, 1919.....	\$2,623,620
Expended, 1917.....	\$7,637.67
Number of nurses for whom it is estimated commutation of rations will be paid.....	17,565
Days for which it is estimated commutation will be paid.....	365
Rate of commutation:	
17,295, at.....	\$0.40
270, at.....	\$1.00
Total estimate.....	\$2,623,620

Item 107e.—For payment of commutation of rations to enlisted men selected to contest for places and prizes in department and Army rifle competitions: No estimate submitted. These contests have been discontinued during the war.

Item 107f.—For payment of commutation of rations to male and female nurses on leave of absence:

Estimated, 1919.....	\$133, 371
Expended, 1917.....	\$19, 330. 54
Number of nurses to whom it is estimated commutation of rations will be paid.....	1, 218
Days for which it is estimated commutation will be paid.....	365
Rate of commutation.....	\$0. 30
Total estimate.....	\$133, 371

Item 107g.—For payment of commutation of rations to applicants for enlistment while traveling under orders:

Estimated, 1919.....	\$55, 188
Expended, 1917.....	\$1, 352. 88
Number of applicants for whom it is estimated commutation of rations will be paid.....	84
Days for which it is estimated commutation will be paid.....	365
Rate of commutation.....	\$1. 80
Total estimate.....	\$55, 188

Item 107h.—For payment of commutation of rations to general prisoners while traveling under orders:

Estimated, 1919.....	\$274, 626
Expended, 1917.....	\$541. 33
Number of prisoners to whom it is estimated commutation of rations will be paid.....	418
Days for which it is estimated commutation will be paid.....	365
Rate of commutation.....	\$1. 80
Total estimate.....	\$274. 626

Item 107i.—For payment of commutation of rations to members of the Nurse Corps (female) while on duty at hospitals:

Estimated, 1919.....	\$39, 420
Expended, 1917.....	\$44, 148. 98
Number of nurses to whom it is estimated commutation of rations will be paid.....	270
Days for which it is estimated commutation will be paid.....	365
Rate of commutation.....	\$0. 40
Total estimate.....	\$39, 420

Item 107j.—For payment of commutation of rations to enlisted men sick in hospitals:

Estimated, 1919.....	\$5, 916, 905. 50
Expended, 1917.....	\$566, 053. 90

Number of enlisted men for whom it is estimated commutation will be paid.	Number of days for which it is estimated commutation will be paid.	Estimated rate of commutation.	Total estimate.
2, 307	365	\$0. 50	\$421, 027. 50
37, 643	365	. 40	5, 495, 878. 00
39, 950	.....	.....	5, 916, 905. 50

Item 107k.—For payment of commutation of rations to applicants for enlistment while held under observation:

Estimated, 1919.....	\$12, 264
Expended, 1917.....	\$1, 850. 26
Number of applicants to whom it is estimated commutation of rations will be paid.....	84
Days for which it is estimated commutation will be paid.....	365
Rate of commutation.....	\$0. 40
Total estimate.....	\$12, 264

Item 107-1.—For payment of commutation of rations to general prisoners in hospitals:

Estimated, 1919.....	\$1
Expended, 1917.....	\$4,
Number of prisoners to whom it is estimated commutation of rations will be paid.....	
Days for which it is estimated commutation will be paid.....	
Rate of commutation.....	
Total estimate.....	\$

Item 108.—Advertising, estimated, 1919, \$18,845.

The estimate for 1919 has been placed at \$18,845, an increase over the appropriated for the fiscal year 1918. This increase is due to increase in the and it is thought will meet requirements.

Item 109.—For providing prizes to be established by the Secretary of War for enlisted men of the Army who graduate from the Army schools for bakers and cooks, estimated, 1919, \$900.

Under date of January 12, 1906, the Commissary General recommended to the Secretary of War, in order to stimulate the interest of the enlisted men who are in the schools for bakers and cooks, that small monetary prizes be offered to each graduating class who pass the best competitive examination and request Congress be asked to provide the amount of \$900 in the next annual appropriation bill for this purpose. This was approved and a clause covering it inserted in the appropriation bill for the fiscal year 1907, the prizes to be established by the Secretary of War.

The Secretary of War, under date of July 12, 1906, approved the following recommendation of the Commissary General:

That \$150 be allotted for each of the six graduations from the school during the year. Each allotment of \$150 to be divided among the several schools proportionately according to the number of enlisted men, bakers and cooks, graduated each term. The amount thus allotted each school for its graduating class of cooks and bakers to be divided into prizes as follows:

Three-tenths of such amount as first prize for cooks, three-tenths of such amount as first prize for bakers, two-tenths of such amount as second prize for cooks, two-tenths of such amount as second prize for bakers; and under date of June 11, 1906, the officers in charge of the various schools were informed that the following had been adopted for awarding of prizes to the graduates in baking and cooking at the completion of the respective courses:

Bakers:	
First prize.....	\$15
Second prize.....	10
Cooks:	
First prize.....	15
Second prize.....	10

The sizes of the different classes not to affect the amount of the prize provided the degree of efficiency obtained by the prize winner is such as to warrant a prize being given. In certain cases, even in a large class, the degree of efficiency obtained by the first men might not be so high as to warrant a prize, and in these cases a prize should be awarded, or, if the conditions warranted it, none at all, so that the question of the award of prizes is in the discretion of the officer in charge.

There have been established at the present time six bakers' and cooks' schools which are located as follows:

Washington Barracks, D. C.; Fort Riley, Kans; Presidio of Monterey, Cal; Sam Houston, Tex.; Schofield Barracks, Hawaii; and Fort William McKinley, P. I.

Item 110.—Other necessary expenses incident to the purchase, testing, care, maintenance, issue, sale and accounting for subsistence supplies for the Army, estimated, 1919, \$250,000.

This item, among other things, provides for twine, paper bags, cotton bags, boxes for packing, packing cases, lumber, salt for rebrining, testing apparatus, materials, grinding, roasting, and repacking coffee, electric power for bakeries, kitchen car service, cost of oaths pertaining to contracts for subsistence supplies, and all miscellaneous expenses pertaining to this appropriation not otherwise provided for. This amount, \$250,000, is just 10 times as much as estimated for 1918, due to the amount of testing, etc., required due to war conditions and large increase in Army.

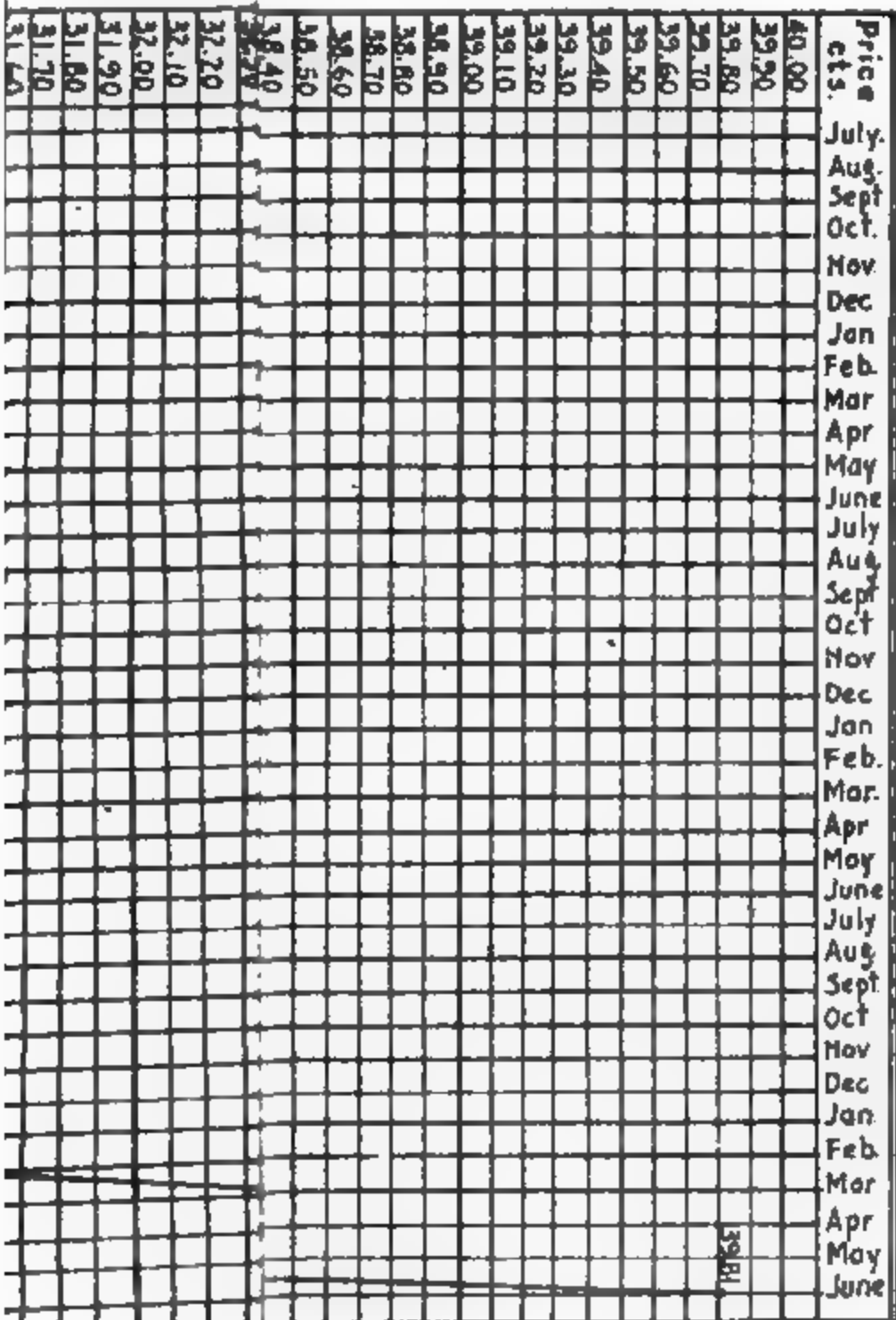
Item 110a.—Customs duties on subsistence supplies, estimated, 1919, \$50,000.

GRAPHIC STATEMENT OF AVERAGE COST OF THE RATION (American)

Fiscal Year 1915

Fiscal Year 1916

Fiscal Year 1917



Items on which customs duties are ordinarily collected in the Philippine Islands are currants, gelatin, handkerchiefs, tapioca, puffed rice, nutmegs, and linen textiles. If matches, tobacco, and toilet preparations (in which, exclusive of water, alcohol forms the principal ingredient), are not purchased by the Government in the Philippines, they would be subject to duty if procured in this country and sent to the Philippines.

No customs duties are paid in the United States on foreign products for use in connection with the subsistence of the Army.

Item 110b.—Losses on subsistence stores, estimated, 1919, \$73,921.30.

Losses occur through theft, deterioration, etc., and the supplies are taken up and dropped in accordance with paragraphs 205 and 206, Subsistence Manual, 1910.

Losses on subsistence stores for the fiscal years 1914, 1915, 1916, and 1917:

1914.....	\$118,318.72	|	1916.....	\$190,942.01
1915.....	131,168.38	|	1917.....	65,159.60

Item 110c.—Hire of employees, estimated, 1919, \$10,100.

Compensation of civilian employees, as follows:

1 inspector (Class A-1 supplies), at \$1,400 per annum.

1 inspector supplies, at \$1,500 per annum.

6 inspectors supplies, at \$1,200 per annum.

Compensation of meat inspectors is not estimated for the fiscal year 1919, in view of the fact that meat inspectors have been transferred to the Medical Department of the Army, under the provisions of section 16 of the act approved June 3, 1916.

ARMY APPROPRIATION BILL, 1919.

Prices paid for articles of the ration purchased at San Francisco, Cal., during the period Oct., 1916, to Aug., 1917.

Articles.	Unit.	1916						1917					
		October.	Novem-ber.	Decem-ber.	January.	Febru-ary.	March.	April.	May.	June.	July.	August.	
Beef, fresh.....	Pound.....	\$0.122	\$0.12	.....	\$0.127	.....	\$0.1475	\$0.1525	\$0.157	\$0.159	\$0.149	\$0.144
Mutton, fresh.....	do.....	.142	.....	.....	.143	.....	.184	.1875	.....	.194	.198	.196
Fish, dried cod.....	do.....	.138	.16	\$0.137	.14	.141	.14	.144	.15	.149	.147	.174	
Fish, pickled mackerel.....	do.....	.1975	.1975	.195	.19	.19	.173	.185	.195	.198	.2038	.2075	
Fish, salmon.....	Can.....	.15	.153	.155	.153	.1713	.1743	.186	.2033	.2067	.1933	.....
Flour.....	Pound.....	.475	.45	.505	.45	.479	.45	.45	.044	.679	.675	.613	
Hard bread.....	do.....	.775	.....	.13	.11	.11	.1038	.11	.975	.1038	.18	.173
Corn meal, white.....	do.....	.25	.25	.25	.25	.25	.25	.25	.25	.25	.489	.6	
Corn meal, yellow.....	do.....	.25	.25	.25	.25	.25	.25	.25	.25	.25	.485	.514	
Baking powder.....	Can.....	.267	.2675	.267	.2643	.2653	.2703	.2539	.269	.3213	.323	.333	
Beans.....	Pound.....	.775	.1074	.1105	.109	.1162	.1241	.118	.153	.1578	.153	.1497	
Beans, baked (No. 1).....	Can.....	.65	.65	.65	.65	.65	.65	.65	.65	.65	.85	.95	
Beans, baked (No. 3).....	do.....	.1453	.1453	.22	.1453	.....	.1453	.1453	.....	.3375	.235	.2113
Rice.....	Pound.....	.....	.....	.....	.....	.....	.347	.375	.65	.635	.6	.59
Hominy.....	do.....	.....	.25	.25	.....	.....	.25	.25	.25	.25	.521	.....
Do.....	Can.....	.63	.....	.....	.63	.62	.....	.62	.63	.62	.5053	.1025
Potatoes.....	Pound.....	.163	.223	.237	.26	.299	.594	.397	.558	.471	.344	.277	
Onions.....	do.....	.225	.275	.326	.364	.605	.1137	.675	.775	.613	.314	.139	
Tomatoes.....	Can.....	.895	.1025	.1043	.998	.998	.1043	.1043	.128	.133	.161	.1718	
Prunes, boxes.....	Pound.....	.699	.773	.82	.835	.834	.8	.845	.957	.1149	.1175	.1175	
Prunes (No. 5).....	Can.....	.905	.938	.104	.103	.103	.102	.1254	.1435	.145	.137	.1257	
Apples, evaporated, boxes.....	Pound.....	.55	.78	.81	.83	.87	.91	.905	.925	.104	.....	.1064
Apples, evaporated, cans.....	do.....	.102	.109	.119	.1178	.117	.1158	.1233	.1426	.1438	.....	.1433
Peaches, evaporated, cans.....	do.....	.938	.981	.103	.1008	.1048	.1007	.1037	.1188	.1333	.125	.1345	
Peaches, evaporated, boxes.....	do.....	.683	.626	.745	.745	.79	.71	.76	.....	.805	.1005	.978
Jam, blackberry.....	Can.....	.....	.1925	.1925	.1925	.....	.....	.1925	.2219	.2331	.2353	.2483
Coffee, roasted.....	Pound.....	.....	.....	.....	.155	.1575	.1575	.1538	.1535	.1535	.1525	.15
Coffee, roasted and ground.....	do.....	.1781	.....	.1723	.1742	.1706	.1618	.16	.152	.175	.1587	.1723
Tea, green.....	do.....	.....	.49	.50	.51	.52	.525	.525	.46	.49	.535	.525
Tea, black.....	do.....	.45	.47	.45	.47	.47	.45	.45	.47	.45	.47	.455	
Sugar, granulated.....	do.....	.675	.679	.64	.621	.609	.625	.734	.699	.685	.736	.795	
Milk, evaporated, pint.....	Can.....	.....	.....	.....	.....	.....	.....	.....	.1003	.....	.10	.....
Vinegar.....	Gallon.....	.1865	.1864	.1729	.1833	.1823	.1864	.1968	.1966	.1833	.2231	.2151	
Pickles, cucumber.....	do.....	.35	.39	.38	.45	.425	.45	.53	.56	.56	.80	.695	
Salt.....	Pound.....	.112	.112	.....	.869	.869	.869	.931	.899	.972	.104	.103
Pepper.....	Can.....	.0679	.0709	.....	.0744	.06	.093	.051	.0823	.0944	.0965	.0975
Cinnamon.....	do.....	.....	.0683	.0904	.094	.....	.0937	.097	.10	.0909	.1024	.1034
Cloves.....	do.....	.....	.09	.....	.09	.....	.....	.1038	.095	.....	.115	.115
Ginger.....	do.....	.....	.0467	.....	.0685	.....	.0625	.13	.0325	.0357	.0975	.094

Nutmeg.....	33	38	36	38	37	34	34
Lard (5-pound pail).....	86	90	97	1.15	1.23	1.27	1.085
Butter, tubs.....	3456	371	35	308	391	3844	4423
do.....	2026	236	2673	265	27	277	2775
Oleomargarine.....	685	69	70	71	795	8325	931
Sirup.....	7292	673	.....	.....	837	8213	98
Flavoring extract, lemon.....	0822	.....	.....	0822	0837	0795	08
Flavoring extract, vanilla.....	0765	0795	0795	0794	0875	0887	087

Prices paid for articles of the ration purchased at New York, N. Y., during the period October, 1916, to August, 1917.

Articles.	Unit.	1916			1917							
		October.	Novem-ber.	Decem-ber.	January.	Febru-ary.	March.	April.	May.	June.	July.	August.
Beef, fresh.....	Pound.....	\$0.117	\$0.107	\$0.1047	\$0.1195	\$0.1275	.....	\$0.1525	\$0.165	\$0.1668	\$0.1518	\$0.1518
Mutton, fresh.....	do.....	.13	.124	.128	.165	.165	.....	.184	.2195	.....	.18	.1708
Pork, salt.....	do.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.2413	.....
Beef, fresh roast (2 pounds)	Can.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bacon, crate.....	Pound.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Beef, corned (2 pounds).....	Can.....	.....	.....	.....	.....	.....	.....	.....	.425	.....	.....	.....
Hash, corned beef (2 pounds)	do.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fish, dried cod.....	Pound.....	.....	.1062	.1138	.1188	.1137	.1138	.122	.1275	.....	.4838	.45
Fish, pickled mackerel.....	do.....	.....	.136	.14	.142	.142	.142	.1393	.....	.....	.4116	.383
Fish, canned salmon.....	Can.....	.....	.1484	.1484	.1638	.1788	.1818	.2082	.....	.....	.1314	.1292
Flour.....	Pound.....	.....	.0324	.0456	.0445	.0441	.0466	.0564	.2234	.235	.2027	.2183
Hard bread.....	do.....	.....	.....	.....	.....	.....	.....	.....	.0676	.0699	.....	.0689
Corn meal, white.....	do.....	.026	.0256	.0304	.031	.0298	.03	.033	.1456	.15	.116	.1277
Corn meal, yellow.....	do.....	.026	.0259	.....	.....	.....	.034	.036	.0403	.044	.045	.045
Yeast, compressed.....	do.....	.30	.30	.30	.....	.....	.30	.....	.0402	.0448	.046	.0484
Baking powder.....	Can.....	.1875	.1875	.1875	.1875	.1875	.1875	.....	.30	.30	.30	.30
Beans.....	Pound.....	.....	.....	.1238	.....	.1372	.1312	.....	.2088	.1463	.1587	.15
Beans, baked.....	Can.....	.....	.....	.07	.085	.085	.09	.093	.1538	.1682	.1394	.14
Do.....	do.....	.1325	.....	.....	.....	.....	.175	.1941	.085	.1235	.0983	.0884
Rice.....	Pound.....	.05	.0525	.0525	.....	.0446	.0498	.0689	.1965	.23	.2169	.17
Hominy.....	do.....	.....	.....	.....	.....	.....	.....	.....	.0753	.0839	.0748	.0718
Hominy, carb. (2 pounds)	do.....	.068	.0787	.0842	.0915	.086	.085	.0862	.038	.0455	.....	.....
Potatoes.....	Pound.....	.0233	.0337	.0342	.0307	.0564	.0632	.05	.1006	.0995	.1113	.1099
Onions.....	do.....	.0282	.0387	.0529	.0421	.0983	.1198	.06	.0489	.0548	.0323	.0288
Tomatoes.....	Can.....	.....	.1148	.1148	.....	.1288	.1297	.1824	.0594	.05	.0308	.0274
Prunes, boxes.....	Pound.....	.0774	.0837	.092	.....	.094	.1024	.1163	.1972	.1818	.1314	.14
Prunes, cans.....	do.....	.1174	.1199	.133	.....	.144	.15	.135	.1234	.1209	.1101	.11
Apples, evaporated, cans.....	do.....	.1048	.1149	.1421	.1298	.1356	.13	.1625	.165	.....	.....	.....
Apples, evaporated, boxes.....	do.....	.0648	.0747	.087	.0856	.0941	.083	.1044	.1188	.1163	.1075	.1175
Peaches, evaporated, cans.....	do.....	.1092	.114	.1236	.1248	.1368	.1324	.145	.145	.....	.....	.....
Peaches, evaporated, boxes.....	do.....	.0692	.074	.0824	.0798	.0818	.0874	.1042	.1065	.112	.105	.1057
Jam, blackberry.....	Can.....	.....	.....	.....	.....	.....	.25	.295	.325	.33	.30	.297
Coffee, roasted.....	Pound.....	.....	.1439	.1488	.....	.....	.....	.1384	.1533	.....	.....	.....
Coffee, R. & G.....	do.....	.....	.1445	.1475	.....	.....	.....	.1425	.1503	.....	.....	.....
Coffee, green.....	do.....	.11	.106	.106	.11	.11	.101	.11	.11	.1088	.....	.....
Tea, black.....	do.....	.50	.49	.49	.....	.....	.....	.40	.30	.24	.355	.48
Tea, green.....	do.....	.....	.51	.52	.....	.60	.....	.58	.42	.72	.42	.60
Sugar, granulated.....	do.....	.....	.0705	.0705	.....	.0706	.....	.08	.075	.075	.0745	.08
Milk, evaporated, cans.....	Pint.....	.....	.0896	.0978	.096	.106	.....	.1099	.0986	.0958	.0949	.098

Vinegar.....	Gallon.....	.1555	.1475	.1475	.483	.1625	.1625	.1866	.1793	.19	.....	.....	.252
Pickles, cucumber.....	do.....	.405	.405	.403	.....	.....	.433	.4792	.45	.50	.....	.485	.443
Salt.....	Pound.....	.....	.0071	.0071	.0078	.0083	.....	.0084	.0094	.0096	.....	.0087	.0088
Pepper.....	Can.....	.....	.0713	.0713	.0713	.08	.0825	.1006	.0926	.1057	.....	.1074	.1044
Cinnamon.....	do.....	.....	.119	.....	.....	.119	.119	.1024	.12	.084	.....	.1065	.113
Cloves.....	do.....	.....	.....	.....	.....	.....	.....	.109	.112	.116	.....	.1175	.1175
Ginger.....	do.....	.....	.07	.07	.....	.07	.....	.077	.078	.079	.....	.075	.075
Nutmeg.....	Pound.....	.....	.239	.30	.....	.34	.....	.3116	.302	.81	.....	.2931	.294
Lard, tubs.....	do.....	.1545	.1625	.1845	.....	.1662	.184	.2097	.2248	.2395	.....	.2172	.2218
Lard, cans.....	do.....	.....	.1815	.2073	.197	.186	.1945	.2247	.2363	.2448	.....	.2423	.2474
Lard.....	do.....	.....	.829	.9295	.90	.84	.9208	1.131	1.09	1.18	.....	1.05	1.28
Lard substitute, tubs.....	Pall.....	.819	.1295	.1487	.1472	.1363	.1385	.1524	.1698	.1872	.....	.1748	.1677
Lard substitute.....	Pound.....	.1198	.67	.7466	.74	.69	.70	.76	.8497	.9298	.....	.903	.87
Butter, tubs.....	Pall.....	.6997	.3547	.4324	.395	.3744	.392	.41	.41	.4449	.....	.....	.41
Butter, cans.....	Pound.....	.3149	.4324	.4749	.44	.41	.....	.482	.485	.485	.....	.4988	.4775
Oleomargarine.....	do.....	.....	.1572	.185	.195	.1942	.1553	.2138	.17	.485	.....	.22	.285
Sirup, 1/2 barrel.....	do.....	.134	.....	.....	.....	.....	.....	.535	.585	.5625	.....	.....	.....
Sirup, cans.....	Gallon.....	.....	.....	.....	.....	.....	.....	.59	.564	.5725	.....	.62	.62
Flavoring extract, lemon (2 ounces).....	do.....	.....	.085	.085	.....	.....	.....	.1085	.1007	.115	.....	.125	.125
Flavoring extract, vanilla (2 ounces).....	Bottle.....	.085	.085	.085	.085	.089	.105	.1085	.1087	.1266	.....	.....	.....
Flavoring extract, vanilla (2 ounces).....	do.....	.....	.085	.085	.085	.089	.105	.1129	.....	.....	.....	.....	.....

Prices paid for articles of the ration purchased at Chicago, Ill., during the period October, 1916, to August, 1917.

Articles.	Unit.	1916			1917							
		October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.
Beef, fresh	Pound	\$0.14	\$0.16	\$0.2499			\$0.2499		\$0.2487	\$0.3627	\$0.3599	\$0.3577
Bacon, issue (serial 8)	do										.399	.39017
Bacon, issue (serial 10)	do	.2375									.586	.586
Beef, corned (2 pound)	Can	.4548	.49		\$0.4792			\$0.6886	.655	.586	.586	
Beef, fresh roast (2 pound)	do	.496	.49		.4792	\$0.4792		.625	.6465	.648	.574	.5267
Hash, corned beef (2 pound)	do	.345	.3698		.3485			.4445	.4955	.4971	.4565	.395
Beef, corned	do									.5282		.3618
Fish, salmon	do	.1625	.15		.16	.1575	.15	.18	.20	.21	.21	.205
Flour, issue	Pound	.393	.435			.43		.578	.75	.661	.58	.616
Soft, bread	do										.75	
Hard bread	do											
Corn meal	do									.1448		.135
Baking powder	Can	.225	.3	.285	.373	.285	.285	.375	.375	.41	.42	.495
Beans, issue	Pound	.10	.95	.151	.95	.11		.1125	.1125	.1197	.1125	.1437
Beans, baked	Can	.10	.125	.11	.1125	.115		.164	.1675	.1458		.1398
Do	Can	.75	.483				.49		.7	.7	.7	.85
Rice	do	.125	.15				.15	.18	.22	.20	.20	.175
Hominy, coarse	Pound	.465	.475	.475	.423	.475		.75	.76	.745	.72	.7425
Potatoes, fresh	do					.4		.42		.43	.45	.574
Onions, fresh	do	.37	.316									
Tomatoes, small cans	do	.6	.375									
Tomatoes	do	.1166	.145		.12	.1175					.27	
Prunes, in boxes	Can			.1175				.1457				
Apples, evaporated	Pound								.2025	.1733		.1375
Peaches, evaporated	do	.79	.925	.825	.875	.875	.9		.53	.5208		.4905
Jam, blackberry	do	.75	.825	.8		.825	.85	.1087	.12	.119	.1085	.1097
Coffee, issue, roasted and ground	do	.715	.8			.85	.85	.1015	.109	.1085	.1087	.1098
Coffee, issue, roasted	Can	.24	.26	.2575		.26		.9	.9	.105	.10	.11
Tea	Pound	.15	.1575	.1525		.155		.30	.30	.30	.30	.31
Sugar, granulated	do				.1523	.155	.155	.1625	.1675	.1675	.1525	.1525
Milk, evaporated (pint)	do											.15
Vinegar	do	.40	.40	.42	.42	.42		.45	.47	.45	.44	.45
Pickles, cucumber	do	.695	.725		.665	.715	.756	.885	.756	.756		.882
Salt, issue	Can	.10	.833	.625		.96	.96	.107	.12	.12	.12	.119
Pepper, black	Gallon		.21	.165		.165	.165	.1625	.1625	.1625		.17
Cinnamon	do	.3233	.3233	.33	.3233	.35	.35	.3666	.3666	.3666	.35	.3666
Cloves	Pound	.0065	.0065		.008	.008	.008	.0083	.0098	.0077	.0077	.0085
Ginger	Can	.8	.725	.9	.875		.10	.1025	.1025	.1088		.104
Nutmeg	do	.105	.075	.1375	.075	.16	.095	.115	.115	.11		.0925
	do		.09					.11	.1125	.105	.12	.135
	Pound	.275	.275	.10		.28	.30	.10	.10	.09		.08125

Lard, issue.....	.18	.....	2156	.....	2175	.....	2233	.....	2175	.....	2228
Lard, substitute.....	.....	.16	159	.15	1498	.....	.....	.....	.17	.....	1678
Butter.....	.37	.38	389	.....	.....	.....	.....	.....	.....	.....	.....
Oleomargarine.....	.24	.24	.....	.....	.....	.....	.....	.....	.....	.....	.....
Syrup, issue.....	.35	.45	425	.45	.65	.....	.....	.....	.....	.....	.....
Flavoring extract, lemon, 2 ounces	.075	.....	.09	.....	.....	.....	.....	.....	.....	.....	.....
Flavoring extract, lemon, 8 ounces	.....	.25	.....	.25	.25	.....	.....	.....	.....	.....	.....
Flavoring extract, vanilla, 2 ounces	.085	.085	.....	.....	.10	.....	.....	.....	.97	.....	.....
Flavoring extract, vanilla, 8 ounces	.2748	.....	.....	.2898	.2898	.....	.....	.....	.38	.....	.....

Prices paid for articles of the ration purchased at Chicago, Ill., New York, N. Y., and San Francisco, Cal., during May and June, 1917.

Articles.	Chicago.		New York.		San Francisco.	
	May.	June.	May.	June.	May.	June.
	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
Beef, fresh.....pound.....			16.5	16.68	15.7	15.9
Mutton, fresh.....do.....			21.95			19.4
Bacon.....do.....	24.87	36.27				
Beef, fresh, roast.....2-pound can.....	64.65	64.8				
Beef, corned.....do.....		52.82	42.5			
Hash, corned beef.....do.....	49.55	49.71				
Fish, dried cod.....pound.....			12.75		15	14.9
Fish, pickled mackerel.....do.....					19.5	19.8
Fish, canned salmon.....can.....	20	21	22.34	23.5	20.32	23.67
Flour.....pound.....	7.5	6.61	6.76	6.99	6.44	6.79
Hard bread.....do.....		14.48	14.56	15	9.75	10.38
Corn meal, white.....do.....	3.75	4.1	4.03	4.4	2.5	2.5
Corn meal, yellow.....do.....			4.02	4.28	2.5	2.5
Yeast, compressed.....do.....			30	30		
Baking powder.....1-pound can.....	11.25	11.97	20.88	14.63	28.9	32.13
Beans.....pound.....	16.75	14.58	15.38	16.82	15.2	15.78
Beans, baked.....1 pound can.....	7	7	8.5	12.55	6.5	6.5
Beans, baked.....3-pound can.....	22	20	19.65	23		23.75
Rice.....pound.....	7.6	7.45	7.53	8.39	6.5	6.55
Hominy.....can.....		4.3	3.8	4.55	2.5	2.5
Hominy, cartons, No. 2.....pound.....			10.06	9.95	6.2	6.2
Potatoes.....pound.....			4.89	5.48	5.56	4.71
Onions.....do.....			5.94	5	7.75	6.13
Tomatoes.....can.....	20.25	17.33	18.72	18.18	15.9	13.2
Prunes, can.....do.....			16.5		14.35	14.5
Prunes, boxes.....pound.....	12	11.9	12.34	12.09	9.57	11.49
Apples, evaporated, can.....do.....	10.9	10.95	16.57		14.26	14.38
Apples, evaporated, boxes.....do.....			11.88	11.63	9.25	10.4
Peaches, evaporated, can.....do.....	9	10.5	14.5		11.88	13.33
Peaches, evaporated, boxes.....do.....			10.65	11.2		8.65
Jam.....can.....	30	30	32.5	33	22.19	23.31
Co Tee, roasted and ground.....pound.....	16.75	16.75	15.03	15.83	16.2	17.5
Co Tee, green.....do.....			11	10.88		
Tea, black.....do.....			30	24	47	48
Tea, green.....do.....	47	45	42	72	46	49
Sugar, granulated.....do.....	7.56	7.56	7.5	7.5	6.99	6.85
Milk, evaporated.....pint can.....	12	12	9.86	9.58	10.63	
Vinegar.....gallon.....	16.25	16.25	17.93	19	19.86	18.53
Pickles, cucumber.....do.....	36.66	36.66	45	50	86	86
Salt.....pound.....	.93	.77	.94	.96	.869	.973
Pepper.....1/4-pound can.....	10.25	10.88	9.66	10.57	9.23	9.54
Cinnamon.....do.....	11.5	11	12	8.4	10	9.99
Cloves.....do.....	11.25	10.5	11.2	11.5	9.5	
Ginger.....do.....	10	9	7.8	7.9	9.25	9.37
Nutmeg.....do.....	28	28	30.2	31	37	34
Lard, tubs.....pound.....	23	22.23	22.48	23.95		
Lard, pails.....5 pounds.....			109	118	122	127
Lard, pails.....pound.....						
Lard substitute, pails.....5 pounds.....			84.97	92.98		
Lard substitute, tubs.....pound.....	18	18	16.98	18.72		
Butter, tubs.....do.....			41	44.49	39.1	38.44
Butter, cans.....do.....			48.5	48.5		
Oleomargarine.....do.....	24	24.5	17	20.81	27	27.7
Sirup, 1/2 barrel.....gallon.....	67	64.7	58.5	58.25	79.5	83.25
Sirup, cans.....do.....			56.4	57.25		
Flavoring extract, lemon.....2-ounce bottle.....	9.75	9.25	10.07	11.5	8.37	7.95
Flavoring extract, vanilla.....do.....	11	9.7	10.87	12.66	8.75	8.87

SUBSISTENCE SUPPLIES PURCHASED FOR FRANCE.

Beef, fresh, frozen, and issue bacon are purchased by the depot quartermaster, Chicago.

	Cents.	Cents.
Beef.....	15.93	16.45
	16.23	16.65
	16.43	15.85
	15.91	16.82
	16.21	

Bacon, issue.....	Serial No. 8.	Serial No. 10.
	Cents.	Cents.
	41 $\frac{1}{4}$	47 $\frac{1}{4}$
	44. 595	49. 58
	41. 195	47. 15
	45. 6	46. 7
	41. 7	47. 23
	40. 83	
	40. 4	
	40. 73	

Purchased locally:

Potatoes, fresh.

Onions, fresh.

Cheese.

Yeast, dried.

Brushes, hair.

Brushes, shoe.

Brushes, nail.

Oil, olive.

Sardines.

Water, effervescent.

Quantity and price of above articles not known.

All other subsistence supplies for overseas are procured by the depot quartermaster, New York.

Mr. ANTHONY. It may not be exactly germane under a discussion of this item, but I would like to ask Gen. Sharpe what steps are being taken to conserve the waste in the various cantonments.

Gen. SHARPE. I remember I submitted a proposition a while ago which perhaps did not seem feasible. It would seem that there is a lot of waste that can be conserved, such as shoe leather, clothing, and garbage, which can be sold instead of our paying for taking it away.

Mr. ANTHONY. Is it a fact that certain sums are paid to remove garbage, or is the Government saving that now?

Gen. SHARPE. The Government is being paid for the garbage and for the manure, instead of burning it up. They dispose of it, but at the same time it does not seem that there is a direct profit to the extent of the amount of money received from the garbage, because the cost of the trucks and the men employed in collecting the garbage must be taken in to account as against the revenue received from it. But that would have to be done in any event, if the Government took the garbage down to an incinerator and burned it, so that the Government is ahead the amount received for the garbage, although it may not represent an actual profit for the Government.

Mr. ANTHONY. It does not represent a loss, inasmuch as you have to pay the cantonments a certain sum of money to take away the garbage.

Gen. SHARPE. It does not represent a loss, except the cost of carting it to the places where it is to be delivered.

Mr. ANTHONY. Is not the garbage and waste worth enough to somebody to pay for it?

Gen. SHARPE. We have contracts for almost all the cantonments, where they do pay for these things, but some of the garbage at the cantonments; that is, the manure, where there is no way of disposing of it, has to be destroyed, and we have to incinerate that because there is no one we can get to take a contract in those particular places for the manure.

Now, in regard to the conservation of the other items—in the way of leather, bottles, paper, and clothing—we have taken steps to have repair shops installed at every one of the camps where all of the arti-

cles will be repaired up to the time when they can not be repaired, and any of the rags which come from the wool or cotton are kept separately.

The CHAIRMAN. You say there are some camps where nobody will take a contract for the garbage?

Gen. SHARPE. For the manure.

The CHAIRMAN. When you make a contract for that stuff, do you not require the contractor to remove that himself?

Gen. SHARPE. He is required to remove it from a designated point on the outskirts of the reservation. They did not want to have the contractor's teams and people employed on the reservation. They thought it would be better for discipline not to have them on the reservation.

Mr. FIELDS. Does it cost any more to collect the stuff at a designated place for sale than it would to collect it to be burned? There is no difference in the cost of that, is there?

Gen. SHARPE. I do not know that that has been figured out, but the haul would be a little bit greater in some cases, and sometimes it would not be as great. I think we may fairly assume that the cost would be about the same.

Mr. SHALLENBERGER. Can it not be fairly stated that the plan you have adopted represents a distinct saving over the old plan of destroying the waste?

Gen. SHARPE. Absolutely; because we get the proceeds of what the contractor pays for it.

Capt. DALY. The contracts for the removal of garbage and waste were made by the Cantonment Division. The contracts provide in one or two cases a monthly rate, which is paid by the contractor and in other cases there is a per capita based on the actual strength as shown by the reports of strength in the camps. The contracts exclude rags and bags. They are collected by the Government and disposed of. But the contracts do include all other waste, including grease and bones.

The Government furnishes receptacles for the liquid and dry garbage and delivers them to a central point designated by the commanding general of the camp, with their own teams and labor, and from that designated point it is taken up by the contractor.

Gen. SHARPE. We have made other suggestions in the way of conservation, one being that they adopt the old Army custom that when they are making coffee they shall put the sugar in the coffee instead of putting the coffee unsweetened on the table and allowing the men to use the sugar as they desire it. We have always found some balance of sugar at the bottom of the cups when the men sweeten the coffee themselves. That plan has been objected to by some men, who do not want the sugar in their coffee.

In the same way we have made suggestions about the use of corn meal in making bread, and also eliminating sugar and lard in the baking of bread. That all depends upon the quality of flour which we are given. We have not felt that we can issue any positive suggestions that that should be done, but just suggestions along lines of conservation.

As a result of those suggestions, the amount of lard used has been considerably reduced, and they have made experiments and produced good results at all camps by eliminating sugar from the bread. Of course, by the elimination of sugar that means that you have taken

from the bread the water-absorbing element which is in the bread and therefore the bread becomes stale or dry much quicker than it would ordinarily, and when you come to cut it it crumbles, and from some of the camps there has been complaint that the loss by the crumbling more than offsets the cost of the use of sugar.

We do not use bread until it is 24 hours old. Our proportions for the use both of sugar and lard are below the amounts per hundred pounds which the Food Administration has authorized the use of, so that even if we do use our receipts, we are still saving on what they consider to be necessary.

We can not make a definite recommendation or give definite instruction in regard to that, but we have made suggestions, and the men have been very helpful in trying to meet those suggestions.

In regard to the bones and grease, all those things are carefully fried out and all the fat that is possible to obtain is gotten out. So much is that true that the contractors at the camps say that they can not get anything out of the waste, that we have dried everything out of the waste and have gotten all the grease out of it to be used for frying.

We are now using a new composition, one of the cottonseed-oil products, which seems to be giving better results than the lard in the making of bread, because they found that with this particular product you can even fry fish, and then use the product again in making bread, that it does not seem to retain the odor of the fish at all, and that the heat seems to expell the odor. Those compounds cost less than the lard itself.

Mr. FIELDS. And as a result, is the bread as good as it was when made the other way?

Gen. SHARPE. Every bit.

Mr. FIELDS. Have you abandoned that method of making coffee with the sugar in it?

Gen. SHARPE. Yes, sir.

Mr. KAHN. How many of the soldiers complained of the sweetened coffee; very few of the men in a company?

Gen. SHARPE. Very few, yes, sir; just a few men.

The CHAIRMAN. Capt. Daly stated a moment ago that the per capita cost under this item was \$152.21. According to the figures given to the committee last year the per capita cost under this item was \$100. Have the rations gone up to that extent?

Gen. SHARPE. The ration is now costing practically 40 cents—39.85 cents.

The CHAIRMAN. That was authorized last year.

Capt. DALY. That 40 cents was authorized for hospitals. The regular ration was not costing that much at that time.

Mr. FIELDS. That was 29 and a fraction cents, was it not?

Capt. DALY. Yes; we figured it at 30 cents.

Gen. SHARPE. I have here a diagram which I think will be interesting to the committee, showing the advance in the cost of the ration for the last few years.

The CHAIRMAN. Will you put that in the record?

Gen. SHARPE. Yes, sir.

The chart referred to will be found opposite this page.

Mr. KAHN. Has the character of the ration changed?

Gen. SHARPE. No.

Mr. KAHN. You are still using the same ration?

Gen. SHARPE. We are still using the same ration. There have been proposals that it should be changed, but we have opposed that very strenuously for the reason that we did not believe that it was a proper thing to take men to the camp who must be put in as fine physical condition as they can be in order to enable them to do the work they will have to do when they get in the trenches.

Most of the men come from offices, where they have not had the severe exercise outdoors that they get in the Army, and that exercise requires a more liberal diet for them and requires the use of sugar to restore the muscles. That is the only thing which will restore a tired muscle, and we have opposed any reduction, either of the beef or the sugar ration, for that reason. We feel that the men ought to be put in as fine physical condition as they can be before they are called upon to make the greatest physical effort that they have ever had to make, and we have also felt that it was not proper for us to go into the camps and try any of the patent foods. or anything like that, because we do not want to have those men feel that they are members of a poison squad, as they are called in the Department of Agriculture, when they are making experiments. We also feel that as the English have not changed their ration we ought not to change ours.

Mr. KAHN. Can you put in the hearings a complete list of the constituents of the ration?

Gen. SHARPE. Yes, sir; and a statement of its nutritive value.

Mr. KAHN. And also the proportion allowed to each soldier?

Gen. SHARPE. Yes, sir.

(The statement referred to is as follows:)

Table showing components and quantities of various rations, United States Army.

Articles.	(A) Gar- rison ration, quanti- ties.	(B) Field ration.			Reserve ration, quanti- ties.
		No. 1, quanti- ties.	No. 2, quanti- ties.	No. 3, quanti- ties.	
Beef, fresh.....ounces..	14	.....	14	14	.....
Bacon, issue.....do.....	3	12	3.6	3.6	12
Flour, issue.....do.....	18	.....	.....	.....	.....
Hard bread.....do.....	.....	16	.....	.....	16
Bread.....do.....	.....	.....	16	16	.....
Baking powder.....do.....	.08	.....	.....	.....	.....
Beans.....do.....	1.2	4	4	4	.....
Rice.....do.....	.8	.....	.....	.....	.....
Potatoes, fresh.....do.....	14	.....	14	14	.....
Onions, fresh.....do.....	4	.....	.....	2	.....
Tomatoes.....do.....	2	10	5	2	.....
Prunes.....do.....	.384	1.28	1.28	.384	.....
Jam.....do.....	.64	.....	.....	.64	.....
Apples, evaporated.....do.....	.128	.....	.....	.128	.....
Peaches, evaporated.....do.....	.128	.....	.....	.128	.....
Coffee, R. & G.....do.....	1.12	1.12	1.12	1.12	1.12
Sugar.....do.....	3.2	2.4	2.4	3.2	2.4
Milk, evaporated.....do.....	.5	.....	.....	.....	.....
Vinegar.....gill.....	.08	.....	.....	.08	.....
Pickles.....do.....	.08	.....	.....	.08	.....
Salt.....ounces.....	.64	.16	.16	.64	.16
Pepper, black.....do.....	.04	.....	.02	.04	.....
Cinnamon.....do.....	.014	.....	.....	.....	.....
Lard.....do.....	.32	.....	.....	.64	.....
Lard substitute.....do.....	.32	.....	.....	.....	.....
Butter.....do.....	.25	.....	.....	.....	.....
O'eomargarine.....do.....	.25	.....	.....	.....	.....
Sirup.....gill.....	.32	.....	.....	.....	.....
Flavoring extract, lemon.....ounces..	.014	.....	.....	.....	.....
VALUES.					
Protein.....grains..	146.8	110.9	146.9	146.6	81.3
Fat.....do.....	173.5	236.8	143.4	161.5	234.2
Carbohydrates.....do.....	652.9	510	497.7	506.9	404.9
Heat.....calories..	4,761	4,615	3,797	4,068	4,052

For men at hard physical labor, such as blacksmithing, etc., it is estimated by the Agricultural Department that 4,500 calories of energy per day would be required. The analysis of the United States Army garrison ration herewith shows that it produces 4,761 calories, from which it will be seen that we get a higher fuel value from the ration than is required for men at hard physical labor.

There seems to be a general impression among the militia that the present Army ration is adequate provided they have competent men to handle it, and that it provides sufficient variety.

Mr. KAHN. How does our ration compare with the English ration and the French ration and the Italian ration?

Gen. SHARPE. I do not know about the Italian ration, but our ration is practically the same as the English. There are some few components of ours which are in excess of what the English allow, and vice versa, some of theirs are a little in excess of ours; but the nutritive values are about the same, although ours is probably a little bit greater.

Mr. KAHN. Can you put into the hearings a statement of the components of the English ration?

Gen. SHARPE. Yes, sir; I have the English and the French, but I have not got the Italian.

Mr. KAHN. Can you give us the English and the French ration in the hearings so that we will be able to show the House if any question should arise just what the difference is?

Gen. SHARPE. Yes, sir. I have also a table showing the nutritive value of our ration. The regular ration produces 4,761 calories, or if you use our field ration with certain components it produces 4,615 calories. Making use of a more reduced field ration, you get 3,797 calories. With still another change in the field ration, you get 4,068 calories. For men engaged in hard physical labor, such as blacksmithing, it is estimated by the Department of Agriculture that they require about 4,500 calories, and so ours is in excess of that, and that is done to allow them to make substitutions in order to give variety in the diet, and at the same time give full nutritive value to the ration. It is a well-balanced ration, which contains the proper amount of fat and carbohydrates and proteids.

(The tables showing the British, French, and Italian rations, above referred to, are as follows:)

The British ration in the field.

1. Calories.

2. Scale of ration:

(a) Normal ration—

	Calories.
$\frac{1}{2}$ pound fresh or frozen meat.....	683
(See letter Sept. 28, 1917.)	
$\frac{1}{2}$ pound (nominal) preserved meat.....	925
1 pound bread.....	1,185
$\frac{1}{2}$ pound biscuit.....	1,260
4 ounces bacon.....	650
3 ounces cheese.....	375
2 ounces dried vegetables.....	205
$\frac{1}{2}$ pound potatoes or $\frac{1}{2}$ pound vegetables, when supply admits.....	150
3 ounces sugar.....	345
$\frac{1}{2}$ ounce salt.	
$\frac{1}{50}$ ounce mustard.	
$\frac{1}{36}$ ounce pepper.	
$\frac{1}{12}$ tin condensed milk, 1 pound—	
Sweetened.....	1,480
Unsweetened.....	755
$\frac{1}{320}$ gallon lime juice on recommendation of medical officer.....	4

2. Scale of ration—Continued.

(a) Normal ration—Continued.

Calories.

2 ounces tobacco or cigarettes per week for smokers.

1/64 gallon rum, at the discretion of the G. O. C. on the recommendation of the medical officer.....

179

3 boxes matches a fortnight.

8, 196

(b) Increased ration (only on authority of Quartermaster General):

1½ pounds fresh or frozen meat, or..... 1, 525

1 pound (nominal) preserved meat..... 1, 230

1 pound biscuit..... 1, 680

4, 165

(c) Iron ration (one always in possession of each man to meet emergencies):

1 pound biscuit..... 1, 680

1 pound (nominal) preserved meat in compact form..... 1, 230

¼ ounce tea.

2 ounces sugar..... 235

3, 145

(d) Extras—

½ ounce tea and ¼ ounce sugar daily for men in the trenches, when considered necessary by Army commanders..... 85

2 ounces pea soup, or 2 Oxo cubes, or other equivalent available, twice a week for men in the trenches during winter months, or daily for men in the trenches during severe weather on demand of Army commanders.

2 ounces butter, thrice weekly at the front..... 435

When stocks are available, either of the undermentioned, alternative equivalents may be issued for men in the trenches in lieu of the authorized scale of pea soup or Oxo cubes.

(i) ½ ounce cocoa or chocolate, 1/10 tin of condensed milk..... } 2, 255

(ii) ½ ounce tin of cocoa and milk, 1 pound cocoa..... }

Milk..... 315

When stocks are available the following will be issued to all troops:

1 ounce of pickles per man, thrice weekly, cucumber..... 4

(e) Equivalents—

4 ounces rice equal to 4 ounces bread or biscuit (once a week)..... 396

4 ounces dried fruits (when available) equal to 4 ounces jam..... 311

½ pound fresh vegetables (whenever obtainable) equal to 2 ounces dried vegetables..... 205

2 ounces honey equal to 4 ounces jam..... 185

3. A day's menu:

Breakfast—Bacon, bread, jam, tea.

Dinner—Meat, vegetables (as available), bread, and cheese.

Tea—Bread, jam, tea.

Supper—Soup, bread, cheese.

4. Notes:

(a) The daily rations are for consumption from breakfast (inclusive) up to and inclusive of the evening meal on the same day.

(b) Rum is rarely issued during the summer months.

(c) During the winter, and always in very bad billets, straw for bedding is issued weekly at rate of 4 pounds per man.

(d) Fuel is issued as follows: On a basis of 5½ pounds wood per man per day, and on the basis that 1 pound wood equals 1 pound charcoal, or ½ pound coal, or ¼ pound coke.

(i) For men not in trenches, 2½ pounds wood and 1½ pounds coal.

(ii) For men in trenches, 2 pounds coke and ½ pound charcoal.

The balance of the allowance under (ii), which is equivalent to ½ pound coal, may be added to the quantities drawn under (i) and used in rear of the trenches for divisional baths, laundries, etc.

Fuel for authorized fireplaces may be drawn at the weekly rate of 200 pounds.

A 25 per cent increase all around may be authorized in very bad weather when supplies admit.

NEW FRENCH RATION PRESCRIBED FEB. 4, 1916.

Composition of ration.

Articles.	Reserve ration.	Calories.	Strong ration.	Calories.	Normal ration.	Calories.
Bread:						
Soft.....pounds..			1.65		1.65	
Field.....do.....			1.54		1.54	
Hard.....do.....	1.10	1,305	1.32	1,565	1.32	1,565
Meat:						
Fresh or frozen.....do.....			.99	995	.88	885
Canned (seasoned).....do.....	.66	818	.66	818	.66	818
Small stores:						
Dried vegetables.....do.....				350		210
Rice.....do.....			.22	350	.132	210
Salt.....do.....			.044		.044	
Sugar.....do.....	.176	320	.0704	130	.0462	85
Roasted coffee—						
In tablets.....do.....	.0792					
Loose or in tablets.....do.....			.0528		.0352	
Green coffee.....do.....			.0627		.0418	
Lard, when fresh meat is issued.....do.....			.066	270	.066	270
Potage sale, when canned meat is is- sued.....pounds..	.11	20	.11	20	.11	20
Chocolate, in 2-ration tins (per pound 2.770).....pounds..	.275					
Wine.....pints.....			.66	180	.44	120
Beer.....do.....				140		92
Cider.....do.....			1.32	266	.875	111
Brandy.....do.....	.11	140	.11	140	.11	140
Tobacco:						
"Caporal" for officers.....pounds..	.044		.044		.044	
"Cantine" for enlisted men.....do.....	.044		.044		.033	
Total.....		2,603		5,224		4,526

1 10 pieces or crackers.

2 12 pieces or crackers.

Order dated February 4, 1916.

It will be noted that in the new tables the extraordinary supplements authorized have been considerably curtailed and that quite a number of changes have been made in the authorized substitutive equivalents.

It will also be noted that 0.275 pound of chocolate has been added to the reserve ration. This results in bringing the total weight of the reserve ration up from 2.53 pounds to approximately 2.80 pounds.

It will also be noted that the allowances of wine and beer have been somewhat increased; that cider has been added to this; and that these articles are now regular articles of issue instead of being authorized "to each man in bivouac or when specially ordered."

It will also be noted that the allowance of fresh meat in the strong ration has been reduced from 1.10 to 0.99 pounds.

EXTRAORDINARY SUPPLEMENTS ISSUED.

The sole extraordinary supplements of the normal ration authorized to be issued are as follows:

Articles.	First rate.	Calories.	Second rate.	Calories.
Fresh meat.....pounds..	0.055	55	0.11	110
Sugar.....do.....	.0182	25	.0242	45
Coffee ¹.....do.....	.0088		.0176	
Wine.....pints.....	.22	60	.22	60

¹ Negligible.

(a) Either the first or second rate may be authorized, or a portion at one rate, and the remaining articles at the other rate, or the issue authorized may be restricted to one, two, or three of the articles mentioned.

(b) The authorized substitutive equivalents (list follows) may be substituted for the foregoing. In this case the rate of issue of the substituted article is increased proportionately with the supplement it replaces.

(c) The supplements which may be authorized to the strong ration by the commander in chief are not fixed.

(d) Under no circumstances will the additional supplements authorized in the issue of fresh meat exceed 1.10 pounds (1,105 calories).

The order authorizing a supplement of the ration will state the corps, fraction of the corps, detachment or service to which the authorization is accorded.

Orders relating to changes of the ration and authorizing the issue of supplements will always be furnished to the intendant, who will keep a record of the same, together with the names of the corps or fractions of the corps for whom the supplements have been authorized.

Authorized substitutive equivalents.

Quantities.	Articles.	Equivalents.	
		Pounds.	Calories.
Pounds. 0.88	Fresh or frozen beef may be substituted by—		
	Mutton, fresh pork, fowls, horse, ¹ fresh fish, salted codfish, ¹ smoked or salted herring, ¹ salted sardines.....	0.88	775
	American or Australian smoked or salted meats ¹.....	.55	550
	Meat pudding, bologna sausage, fresh sausage.....	.66	1,160
	Salt pork.....	.528	1,505
	Eggs, No. 8.....		505
	Canned fish (thon or sardines in oil).....	.44	407
.066	Lard may be substituted by—		
	Cocoa butter, oleomargarine.....	.066	225
.22	Beef fat.....	.088	300
	Rice or dried vegetables may be substituted by—		
	Split peas, lentils, noules, vermicelli, semoule, Italian paste, tapioca, wheat flour, corn meal, cheese (Gruyere or Holland).....	.22	360
	Canned vegetables.....	.264	256
	Potatoes.....	1.65	500
	Sauerkraut.....	1.32	160
	Carrots, turnips, cabbage.....	2.20	335
.55	Bread may be substituted by—		
	Wheat flour, corn meal, vegetable flour, "pates" semoule, tapioca....	.396	610
.0528	Potatoes.....	2.20	670
	Coffee, roasted, may be substituted by—		
	Tea.....	.0176	.....

¹ The food value of these articles is inferior to that of the meat ration which it replaces. It therefore follows that fats, cheese, vegetables, sugar, eggs, or wine must be bought from the "company fund" (fonds ordinarie) to make good on "loss in food value."

Italian ration.

	Calories.
1. Bread, 750 grams.....	1,955
2. Meat, 200 grams (with 25 per cent of bone and 10 per cent additional).....	445
3. Paste, 200 grams (3 days per week).....	715
4. Rice, 180 grams (4 days per week).....	635
5. Bacon, 15 grams.....	90
6. Sa't, 20 grams.....	
7. Condiments or kidney beans, 50 grams.....	90
8. Occasional additions or substitutions: Tomato preserves, herbs, meat, paste, bacon.....	
9. Wine, 25 centiliter of roasted coffee 10 grams and sugar 15 grams=60 calories..	156
Total.....	4,086

In war the meat component is increased to 375 grams (824 calories), and cigarettes are added to the ration. There are also at times added 200 grams (135 calories potatoes, 705 calories vegetables) to 250 grams (165 calories potatoes, 880 calories vegetables) of vegetables and potatoes.

Typical Italian war menu.

[Breakfast, see par. 1; midday meal, see pars. 2 and 3; evening meal, see pars. 4 and 5.]

	Calories.
1. Some one of the following items:	
Dry figs, 120 grams.....	385
Chestnuts, 150 grams.....	320
Almonds, 40 grams with shells.....	145
Walnuts, 40 grams with shells.....	75
Hazelnuts, 40 grams with shells.....	135
Cheese, 40 grams.....	180
Olives, 30 grams.....	65
Sardines, 30 grams.....	60
Herrings, 30 grams.....	50
Fresh apples, 200 grams.....	95
2. Meat, 200 grams (190 grams of frozen) three times a week.....	440
3. Vegetable soup or broth four times per week, according to one of the following types:	
(A) Type of vegetable soup—	
(a) Vegetable (French beans, chickpeas, lentils, beans, etc.), 80 grams.....	48
(b) Paste 50 grams, or potatoes 120 grams, or greens (cabbage), 200 grams.....	60
(c) Condiments, 5 centigrams.....	Negligible.
(B) Type of broth:	
(a) Paste or rice 50 grams.....	175
(b) Vegetables 50 grams, or potatoes 100 grams.....	15
(c) Assorted greens (cabbage, endive, celery, carrots, parsley, etc.), 150 grams.....	40
(d) Condiments 5 centigrams.....	Negligible.
4. Rice 120 grams three times a week.....	350
5. Vegetables, 50 grams or potatoes 100 grams or greens 150 grams, three times a week.....	35
6. Paste 150 grams with vegetables 50 grams or greens 150 grams, twice a week..	210
7. Paste 200 grams three times a week.....	715
8. Condiments 8 centigrams.....	Negligible.
9. Wine 25 centiliters.....	156

Mr. KAHN. That ration was agreed upon by a board, was it not?

Gen. SHARPE. Yes, sir; it was agreed upon by a board, after years of very exhaustive study having been given to the matter.

Mr. KAHN. Can you recall who, or which branches of the Army, or of any other Department of the Government agreed upon that ration?

Gen. SHARPE. We have always consulted the Medical Department about any modifications in the ration, and we have also consulted the Bureau of Experiment Stations of the Agricultural Department, and the Bureau of Chemistry, Dr. Wiley, and Dr. Alsberg. Then we have taken the opinions of such men as Prof. Chittenden, of Yale, and Prof. McDonald, and we have also consulted the so-called extremists. I do not mean that we have listened to the extremists, such as the men who favor the use of oatmeal.

Mr. KAHN. My desire is to get into the hearings just what the value of the ration is, because some people complain that we do not feed the soldiers well enough.

The CHAIRMAN. That was put into the record last year, but I think it ought to be repeated this year. In connection with that, I wish you would also put into the record a statement showing the menus for breakfast, dinner and supper on the various days of the week.

Gen. SHARPE. Yes, sir; I will do that.

(The statements referred to follows.)

Bills of fare for 10 days—100 men on the garrison ration at Fort Riley, Kans.

[Value of ration (July, 1917) \$0.4123; cash allowance per day, \$41.23.]

	Cost.
First day (Sunday):	
Breakfast.....	\$11.60
Canteloupes, $\frac{1}{2}$ each.	
Oatmeal, sugar, milk.	
Fried pork sausage.	
Hot biscuits, coffee.	
Dinner.....	22.10
Fresh vegetable soup, 10 gallons.	
Croutons (diced bread toasted).	
Veale a la Creole.	
Boiled rice, string beans (fresh).	
Lettuce salad.	
Ice cream, cake.	
Bread, ice water.	
Supper (cold).....	9.00
Potato salad.	
Bread, jam, iced tea.	
Cost, first day.....	<u>42.70</u>
Second day:	
Breakfast.....	11.20
Corn flakes, sugar, milk.	
Beef stew, boiled potatoes.	
Toast, bread, coffee.	
Dinner.....	18.00
Boiled beef, with dumplings.	
Spinach, young beets, pickles.	
Apple and peach pie, iced tea, bread.	
Supper.....	9.40
Beefsteak, breaded, scalloped potatoes.	
Hot Parker House rolls, iced tea.	
Cost, second day.....	<u>38.60</u>
Third day:	
Breakfast.....	12.85
Stewed prunes.	
Oatmeal, sugar, and milk.	
Hamburger steak.	
Baked potatoes.	
Bread, toast, coffee.	
Dinner.....	12.65
Rice and tomato soup, croutons.	
Boiled bacon and cabbage.	
Macaroni with cheese.	
Lettuce and radishes or young onions.	
Brown Betty, with raisins or currants.	
Caramel sauce.	
Hot corn bread, iced tea.	
Supper.....	9.45
Hot rolls, butter, jam, iced tea.	
Cost, third day.....	<u>35.00</u>

Fourth day:	Cost.
Breakfast.....	\$13. 50
Canteloupes, corn flakes, sugar, and milk.	
Fried liver and bacon, fried onions.	
Toast, bread, coffee.	
Dinner.....	15. 30
Beef a la mode.	
Boiled potatoes, creamed cauliflower.	
Pickles.	
Tapioca pudding, Vanila sauce.	
Iced tea, bread.	
Supper.....	8. 35
Chili con carne, hot biscuits.	
Stewed peaches, iced tea.	
Cost, fourth day.....	<u>37. 15</u>
Fifth day:	
Breakfast.....	12. 30
Milk toast, fresh apple sauce.	
Beefsteak and onions, baked potatoes.	
bread, coffee.	
Dinner.....	17. 90
Cream of potato soup, croutons.	
Beef potpie, boiled potatoes, boiled beets.	
Lettuce salad, cottage pudding.	
Chocolate sauce, iced tea, bread.	
Supper.....	11. 50
Fried ham, hot Parker House rolls.	
Apple sauce, iced tea.	
Cost, fifth day.....	<u>41. 70</u>
Sixth day:	
Breakfast.....	9. 60
Oatmeal, sugar, and milk.	
Fried pork sausage.	
Lyonnaise potatoes.	
Bread, toast, coffee.	
Dinner.....	22. 80
Vegetable soup, croutons.	
Soft roast beef.	
Mashed potatoes, stewed corn.	
Piccalilli, lemon ice.	
Spiced cake, bread, ice water.	
Supper.....	8. 65
Hot tea buns, jam, butter, iced tea.	
Cost, sixth day.....	<u>41. 05</u>
Seventh day:	
Breakfast.....	12. 00
Bananas, corn flakes, sugar, and milk.	
Beef stew, baked potatoes.	
Toast, bread, coffee.	
Dinner.....	20. 00
Roast ribs of beef, browned potatoes.	
Spaghetti, Italian style, pickles.	
Apple dumplings, plain sauce.	
Bread, ice water.	
Supper.....	9. 10
Veal cutlets, breaded.	
Hot biscuits, jelly or jam, iced tea.	
Cost, seventh day.....	<u>41. 10</u>

Eighth day:	Cost.
Breakfast.....	\$12.70
Canteloupes, Oatmeal, sugar, and milk.	
Hot cakes, butter, sirup, coffee.	
Dinner.....	24.15
Fresh vegetable soup, croutons.	
Fricassee of chicken.	
Green peas, creamed potatoes.	
Sliced tomatoes and cucumbers.	
Jelly cake, lemonade, bread.	
Supper.....	8.85
Cold roast beef, potato salad.	
Bread, apple sauce, iced tea.	
Cost, eighth day.....	<u>45.70</u>
Ninth day:	
Breakfast.....	14.75
Hot milk toast.	
Fresh rhubarb sauce.	
Fried spareribs, baked potatoes.	
Toast, bread.	
Coffee.	
Dinner.....	15.55
Boiled Vienna sausage and cabbage.	
Boiled potatoes.	
Hot corn bread.	
Piccalilli.	
Plum duff, caramel sauce.	
Iced tea.	
Supper.....	8.00
Scrambled brains, Jenny Linds.	
Apple or peach sauce, iced tea.	
Cost, ninth day.....	<u>38.30</u>
Tenth day:	
Breakfast.....	12.50
Bananas, 1 each.	
Oatmeal, sugar, and milk.	
Beef hash, lyonnaise potatoes.	
Toast, bread, coffee.	
Dinner.....	13.40
Baked pork and beans.	
Spinach, piccalilli.	
Hot corn bread.	
Rice pudding, caramel sauce.	
Iced tea.	
Supper.....	11.60
Cold sliced Bologna sausage.	
French fried potatoes.	
Pickled beets.	
Hot rolls or buns, pumpkin pie, iced tea.	
Cost, tenth day.....	<u>37.75</u>

Articles to be purchased for each meal, with totals for 10-day period.

	Beef, fresh, pounds.	Bacon, pounds.	Flour, pounds.	Bread, soft, pounds.	Corn meal, pounds.	Baking powder, ounces.	Beans, issue, pounds.	Rice, pounds.	Potatoes, pounds.	Onions, pounds.	Tomatoes, cans.	Prunes, pounds.	Apples, evaporated, pounds.
First day:													
Breakfast.....			25			24							
Dinner.....		2	12	30		12		8	4	4	4		
Supper.....				30					30	5			
Second day:													
Breakfast.....	20			30					35	5			
Dinner.....	50		20	30		12							12
Supper.....	25		28						25				
Third day:													
Breakfast.....	25			40					30	6		10	
Dinner.....		10			15	16		4			10		
Supper.....			25										
Fourth day:													
Breakfast.....		10		40						10			
Dinner.....	50			30					40				
Supper.....	15		25			24	8						
Fifth day:													
Breakfast.....	30			35					25	10			
Dinner.....	25		22	30		20			55	9			
Supper.....			22										
Sixth day:													
Breakfast.....				40									
Dinner.....	40	2	12	30		12			39	10	9		
Supper.....			22										
Seventh day:													
Breakfast.....	20			40					30	5	2		
Dinner.....	60		8	30					40	4	4		
Supper.....			24										
Eighth day:													
Breakfast.....			25			24							
Dinner.....		2	12	30		12			29	4	4		
Supper.....	15			30					30	5			6
Ninth day:													
Breakfast.....				40					25				
Dinner.....			12		15	24			30	5	5		
Supper.....			22										
Tenth day:													
Breakfast.....	25			40					35	5			
Dinner.....		6			15	12	15	8		5	9		
Supper.....			22						35				
Total.....	400	32	336	575	45	192	23	20	537	92	47	10	18
Price per unit (cents)	15.56	23.44	5.97	4	3.9	1.5	18	8	5.58	4	17.76	11.5	10.78

Articles to be purchased for each meal, with totals for 10-day period—Continued.

	Peaches, evaporated, pounds.	Jam, cans.	Coffee, R. & G., pounds.	Tea, pounds.	Sugar, pounds.	Milk, evaporated, cans.	Vinegar, quarts.	Pickles, quarts.	Salt, pounds.	Pepper, boxes.	Cinnamon, ounces.	Nutmeg, ounces.	Lard, substitute, pounds.
First day:													
Breakfast.....			3½		8	15	17		100	6			3
Dinner.....					11		2						3
Supper.....		12		½	12								
Second day:													
Breakfast.....			3½		7	14							
Dinner.....				½	15			8					4
Supper.....				½	13	2							
Third day:													
Breakfast.....			3½		9	16							2
Dinner.....				½	22								2
Supper.....		8		½	13								2
Fourth day:													
Breakfast.....			3½		7	16							
Dinner.....				½	12			8					
Supper.....	8			½	12								3
Fifth day:													
Breakfast.....			3½		12	12							
Dinner.....				½	26	11	4						
Supper.....				½	14								2
Sixth day:													
Breakfast.....			3½		9	16							
Dinner.....				½	21	2	4	4		1	4	4	3
Supper.....		10		½	14								2
Seventh day:													
Breakfast.....			3½		8	16							
Dinner.....				½	9		1	4					4
Supper.....				½	14								4
Eighth day:													
Breakfast.....			3½		12	16							2
Dinner.....				½	18	2	4						2
Supper.....				½	15								
Ninth day:													
Breakfast.....			3½		12	12							
Dinner.....				½	29		4	4					2
Supper.....	10			½	14								2
Tenth day:													
Breakfast.....			3½		8	16							
Dinner.....				½	29	3	4	4					3
Supper.....				½	18								6
Total.....	18	30	35	8	423	169	40	40	100	7	4	4	53
Price per unit (cents)	9.375	30	15	48	8.25	10.73	4	11	.58	10.5	2	2.5	17.86

Articles to be purchased for each meal, with totals for 10-day period—Continued.

	Butter, pounds.	Sirup, cans.	Lemon, extract, ounces.	Vanilla, extract, ounces.	Apples, fresh.	Beets, pounds.	Bananas, pounds.	Beans, fresh, pounds.	Brains, beef, pounds.	Chicken, pounds.	Cabbage, pounds.	Cantaloupes, each.	Cornflakes, packages.
First day:													
Breakfast.....			32	32								50	
Dinner.....								35					
Supper.....													
Second day:													
Breakfast.....													10
Dinner.....						50							
Supper.....	1												
Third day:													
Breakfast.....													
Dinner.....											50		
Supper.....	8												
Fourth day:													
Breakfast.....												50	10
Dinner.....													
Supper.....													
Fifth day:													
Breakfast.....	$\frac{1}{2}$				1								
Dinner.....	1					25							
Supper.....													
Sixth day:													
Breakfast.....													
Dinner.....											15		
Supper.....	6												
Seventh day:													
Breakfast.....							30						8
Dinner.....	1				1								
Supper.....													
Eighth day:													
Breakfast.....	8	1										50	
Dinner.....	1									50	4		
Supper.....													
Ninth day:													
Breakfast.....	$\frac{1}{2}$												
Dinner.....											50		
Supper.....									30				
Tenth day:													
Breakfast.....							30						
Dinner.....											10		
Supper.....						50							
Total.....	27	1	32	32	2	125	60	35	30	50	129	150	28
Price per unit (cents)	36.5	74	4	4	100	2	4	4	9.75	20	2.5	5	9

Articles to be purchased for each meal, with totals for 10-day period—Continued.

	Cheese, pounds.	Cauliflower, pounds.	Cucumbers, pounds.	Corn, sweet, cans.	Carrots, pounds.	Chocolate, pounds.	Currants, packages.	Eggs, dozen.	Gelatin, box.	Hams, pounds.	Jelly, pounds.	Lettuce, bunches.	Lemons, dozen.
First day:													
Breakfast.....													
Dinner.....					4						6	24	
Supper.....													
Second day:													
Breakfast.....													
Dinner.....													
Supper.....													
Third day:													
Breakfast.....													
Dinner.....	3						2	2					
Supper.....													
Fourth day:													
Breakfast.....													
Dinner.....		30					2						
Supper.....													
Fifth day:													
Breakfast.....													
Dinner.....						$\frac{1}{2}$		1				24	
Supper.....										25			
Sixth day:													
Breakfast.....													
Dinner.....				18	4			4	1				4
Supper.....													
Seventh day:													
Breakfast.....													
Dinner.....													
Supper.....								3			14		
Eighth day:													
Breakfast.....													
Dinner.....			10		4			2			6		8
Supper.....													
Ninth day:													
Breakfast.....													
Dinner.....							2						
Supper.....								2 $\frac{1}{2}$					
Tenth day:													
Breakfast.....													
Dinner.....								1					
Supper.....													
■ Total.....	3	30	10	18	12	$\frac{1}{2}$	6	15 $\frac{1}{2}$	1	25	26	48	12
Price per unit (cents)	25	4	12	15	2	17.5	17.5	35	13	25	5	5	25

Articles to be purchased for each meal, with totals for 10-day period—Continued.

	Liver, pounds.	Macaroni, pounds.	Oatmeal, cans.	Olive oil, quarts.	Onions, young, bunch.	Peas, green, cans.	Pepper, chili, cans.	Pumpkins, can.	Radishes, bunches.	Raisins, packages.	Rhubarb, pounds.	Sauce, Worcester-shire, bottles.	Sausage, pork, pounds.
First day:													
Breakfast.....			5										25
Dinner.....				1									
Supper.....													
Second day:													
Breakfast.....													
Dinner.....													
Supper.....													
Third day:													
Breakfast.....													
Dinner.....		8			36					2			
Supper.....													
Fourth day:													
Breakfast.....	25												
Dinner.....										2			
Supper.....							1						
Fifth day:													
Breakfast.....													
Dinner.....													
Supper.....													
Sixth day:													
Breakfast.....			5										30
Dinner.....													
Supper.....													
Seventh day:													
Breakfast.....													
Dinner.....												1	
Supper.....													
Eighth day:													
Breakfast.....			5										
Dinner.....						10							
Supper.....				1									
Ninth day:													
Breakfast.....											20		
Dinner.....										2			
Supper.....													
Tenth day:													
Breakfast.....			5										
Dinner.....													
Supper.....								6					
Total.....	25	8	20	2	36	10	1	6		6	20	1	55
Price per unit (cents)	12	8	7.75	95	4	14.5	19	10.5	4	11	5	23	15

Articles to be purchased for each meal, with totals for 10-day period—Continued.

	Sausage, bologna, pounds.	Sausage, Vienna, pounds.	Spaghetti, pack- ages.	Spinach, cans.	Spare ribs, pounds.	Starch, corn, pack- ages.	Tapioca, packages.	Turnips, pounds.	Veal, pounds.	Ice cream, gallons.	Yeast, dried, pack- ages.	Apples, 10-pound tins.	Tomatoes, fresh, pounds.
First day:													
Breakfast.....													
Dinner.....								4	45	8			
Supper.....													
Second day:													
Breakfast.....													
Dinner.....				12									
Supper.....													
Third day:													
Breakfast.....													
Dinner.....						1							
Supper.....											1		
Fourth day:													
Breakfast.....													
Dinner.....							6						
Supper.....													
Fifth day:													
Breakfast.....													
Dinner.....						1							
Supper.....											1	5	
Sixth day:													
Breakfast.....													
Dinner.....								4					
Supper.....											1		
Seventh day:													
Breakfast.....													
Dinner.....			8			1							
Supper.....									25				
Eighth day:													
Breakfast.....													
Dinner.....						1		4					30
Supper.....													
Ninth day:													
Breakfast.....					80								
Dinner.....		85											
Supper.....													
Tenth day:													
Breakfast.....													
Dinner.....				12									
Supper.....	25										1		
Total.....	25	35	8	24	60	4	6	12	70	8	4	5	20
Price per unit (cents)	14	14.5	8	12.5	13.5	7	14.5	2	14.5	75	5	22	5

RECAPITULATION.

Allowance for 10 days..... \$412.30
Total cost of articles on bill of fare..... 399.05

Balance..... 13.25

NOTE.—The balance of \$13.25 is to be used to purchase extra ice, soup bunches, spices, such as ginger, cloves, etc., and should cover all extra costs for the 10-day period.

It is not intended that this bill of fare be blindly followed, but that it be used as a guide to variety, quantity, and cost in the locality where the troops may be stationed.

The supper meal is purposely stated light in order to give the cooks an opportunity to use left-over food, such as hash, potpies, croquettes, etc.

There is ample money left after figuring out the cost for the period to purchase all the seasonings and condiments required.

Provision is also made for the purchase of what extra ice may be needed. The cost of ice at Fort Riley is 24 cents per hundred pounds.

ALLOWANCES.

Ice..... 100 pounds per day.
Soap..... 0.64 ounce for each ration.
Candles (when other lights are not furnished)..... 0.24 ounce each ration.
Matches..... 36 boxes per month.
Toilet paper..... 1,000 sheets to each 60 rations.
Housewives (for service in the field)..... 1 to each squad.

Brooms, lye, mops, sapolio, and scrubbing brushes, such quantities as the commanding officer may approve.

Requisitions should be made for all issues and allowances.

A clean kitchen and a clean dining hall are indispensable to a successful mess.

Dishtowels may be obtained by asking for empty floursacks from the local bakeries, for which no charge should be made.

We send out from our office a cookbook and in that cookbook there are menus prescribed, showing what it is possible to make with the ration, and then for the camps we made a little extract edition of that cookbook and we sent that to every one of the organizations at the camps, to show the men how to prepare the rations.

Mr. KAHN. Of course, where there is complaint of the food it is generally due to the fact that the company cook does not know how to utilize the material that is furnished him properly; is that not the case?

Gen. SHARPE. Yes, sir.

Mr. KAHN. Did I understand you to say the other day that you were trying now to train cooks in large numbers to take care of the great increased army?

Gen. SHARPE. Yes, sir. Perhaps, Mr. Kahn, the committee would like to hear the arrangements which were made along that line in order to handle the men in the draft.

The duty of providing the cooks was assigned to our department. Ordinarily, that is a matter which is left to each company commander. Obviously, with the draft army, while the company commanders know their men they could not select their cooks before the arrival of the men who were drafted.

When this proposition was given to us, I suggested to the Secretary of War that he authorize me to employ civilian cooks. He approved that, and I told him it would involve an expense, but I thought it was justified, under the circumstances. It was my purpose to assemble those cooks at the various camps and have the equipment and the food already provided there so that when the men stepped off the trains and were assigned to their different barracks, they would find a hot meal ready for them.

I called a meeting of a number of prominent members of the Hotel Keepers' Association, and some of the members of the Chefs' Association in my office last June or July, and told them there was the biggest problem put up to the hotel community which had ever been presented to that community in any country; that we would provide the material and the implements, but we needed the cooks, and that they had information as to where they could be obtained. We needed for all the camps about 12,000 cooks.

I told them that I did not think it was possible to get that number, but I did expect them to get about 3,600. I appointed Mr. Joseph Byfield, of Chicago, as the chairman of the committee, and Mr. Cecil Craig, of St. Louis, as vice chairman. They appointed the presidents of the local hotel keepers' associations in their respective districts, and then they appointed another subcommittee from the local associations in the various districts, which committee operated in conjunction with officers that I selected in every one of the department headquarters.

They were notified of the number of men they required at the various camps, and through these committees, we got the men. We had them on the ground about the 20th or the 25th of August.

They got their equipment all in shape, and when the first men arrived at the camps they were met with a hot meal, which was served to them day and night, as the trains arrived.

As they were organized into companies, the cooks in the companies were separated out, and every organization had appointed one of these trained cooks we had selected for that purpose. They turned out remarkably well, as a general rule.

There were some few men we found who were not up to the mark, either were not sufficiently cleanly, or were not expert enough in their cooking and there were one or two cases where they came to the camp intoxicated, and we got rid of them right away.

Lord Northcliffe has referred to that in a way which shows the credit which the hotel men are entitled to for the assistance they rendered us, by saying that in every case the men at the camps were provided with a hot meal when they arrived there, and he gave the quality of the meals. We have also started in the camps throughout the country, as you know, schools for bakers and cooks. We had originally four of those schools. We have expanded that number, so that now we have one of those schools at each one of the National Army cantonments, where we are training the men as bakers and cooks, and that school remains permanently at each of those cantonments. We also have the same sort of instruction down at our own school at Camp Johnston, at Jacksonville. We have started recently these training schools in the National Guard camps, and with the accommodations of those schools, and the trained men that they will have in them, we hope to be able, in case of another draft, to provide the cooks who will act as instructors for the new draft, without going on the outside and employing civilians.

They gave us for the employment of those civilians something over \$100,000, but I think the expenditure of every cent of that amount was justified in every way. That is one of the items which we have had practically no complaints of from any of the camps.

Mr. TILSON. By way of corroborating what Gen. Sharpe has said, I saw that system in operation at one of the camps where I watched the first 40 per cent of the men come in, and the order was that there should be a hot meal ready for every man within an hour after he reached the camp, and I believe there was only one case in which the company cook failed to have the meal ready when the men arrived. There was only one such case that I saw, and that company commander received quite a blowing up, as I remember.

Mr. KAHN. When did we organize the first baking schools and cooking schools? That was in 1907 or 1908, was it not?

Gen. SHARPE. That was in 1905, and we had only one school at that time.

Mr. KAHN. It was thought by some of the members of the committee at that time that we were training men who would leave the Army and go to the lumber camps and the construction camps and take no interest in the Army at all. Have you followed this war sufficiently to have determined whether any of those men whom you trained in those schools in times of peace and who went away from the Army and probably took employment in the lumber camps came to the colors when the war broke out?

Gen. SHARPE. Yes, sir, they did that, Mr. Kahn, and I think you may recall that I stated at the time that if we did train the men and

they left us at the time of their discharge, or some of them deserted, to get \$100 a month, as they were offered in the lumber camps, I still thought the schools were justified anyway, because they would produce men we could call upon in time of need, and that that would give to our people a knowledge of cooking which we sadly lacked.

Mr. ANTHONY. You believe that a good cook upholds humanity in general.

Gen. SHARPE. Indeed I do, Mr. Anthony. As a particular illustration as to whether the men returned to the colors, Camp Lewis, in the State of Washington, is one of the most striking cases. We not only had enough of the graduate cooks from the schools, but we had men to spare, who were sent to some of the other camps.

Mr. TILSON. Is not cooking in the field quite a different operation from cooking indoors, and do you not have to have a special kind of training from the training that is required for cooking on a range in a large hotel.

Gen. SHARPE. It is very much different. They do not know how to conserve the heat. They have to cook outdoors in a rainstorm, and they have to produce the meal on time.

Mr. TILSON. Have you taken any steps in regard to educational work to help them out?

Gen. SHARPE. Yes, sir; we are helping and aiding them. Many of them had experience on the border.

Mr. TILSON. Yes; I remember that, personally.

Gen. SHARPE. Many of them went to our schools down on the border. Just before the National Guard was called, I made a recommendation that the same process should be adopted in regard to other camps as was adopted in connection with the National Army camps, and instead of employing civilians, I recommended that the cooks should be assembled from the various organizations and sent in advance together with the men to put up the tentage for them, so that the men, upon their arrival at the camps would have a hot meal provided for them. That was done, and I think that was the means of relieving the situation from any possibility of complaint.

The CHAIRMAN. How does this prize of \$900 work out for graduates?

Gen. SHARPE. It has been a very good thing in the past. I do not know that we will use much of it this year. The men are taking this up more with a desire of learning than through a desire of any of this kind of encouragement. We have continued that in the bill, in case it is desirable to give them prizes.

Mr. KAHN. How about the item of \$12,000 for feeding the men who attend target contests?

Gen. SHARPE. That simply allows us to use the funds to that extent. It does not specifically appropriate that amount of money, and so we continued that provision in the bill. I do not think there will be a rifle competition this year.

Mr. TILSON. Nothing is added to the appropriation bill by reason of the inclusion of that item?

Gen. SHARPE. No, sir.

Mr. QUIN. Have you had good fortune in securing all the good feed necessary for the Army?

Gen. SHARPE. Yes, sir; we have up to the present time.

Mr. QUIN. What is your system of inspection? I suppose it is all inspected?

Gen. SHARPE. Yes, sir; all of it before being purchased. Of course our method of procuring it now differs somewhat from what it was in the past. This year, because of the necessity for the conservation of food, it has been made incumbent upon us to resort to the Food Administration in order to get our supplies through them. In the old days we used to have the men and officers trained, who would go down to the Department of Agriculture here and take a course in chemistry, in qualitative analysis in food, not in quantitative analysis. We did not go into that, because we did not care for that thing. We did want to train the men so that they could find out what was the quality of the food which was purchased.

Take, vinegar, for instance; if that contained some mineral acid, we did not care whether the mineral acid was in solution or was due to some salt in there; we would throw it out. We would give the Government the benefit of the doubt, but we did not go into that refinement of an analysis to that extent. But we could tell whether or not there was some element in a food which ought not to be there. We did not find out the proportion that was in there. In the same way with flour; we used to have monthly analyses made up of the different samples of flour submitted to the different depots. The awards were made on that.

Mr. QUIN. Then you have no trouble in getting them?

Gen. SHARPE. No, sir; we have no trouble. We always have had the inspectors in the packing houses when the meats were being prepared.

Mr. QUIN. There will not be any danger of having any more embalmed beef?

Gen. SHARPE. No, sir. We not only have that inspection which is required by the meat-inspection law, but we have now stationed at every one of these camps a meat inspector assigned by the Agricultural Department. So that while the meat must be inspected meat, we have men there at the camp; we do not rely upon finding out the quality of the meat when it is delivered.

Mr. QUIN. With the proposed method of increasing the Army, will there be danger that you will not have enough inspectors?

Gen. SHARPE. No, sir.

Mr. QUIN. You are well equipped, so far as you can tell now, with the proposed increase of the Army, to inspect all of the food properly, and to procure it for the Army, both in the United States and across the sea?

Gen. SHARPE. Yes, sir.

Mr. ANTHONY. Are you buying your food supplies in the open market, or under the method of securing sealed bids, as heretofore prevailed?

Gen. SHARPE. We are buying them through the Food Administration. Col. Grove can give you the details in reference to that.

Col. GROVE. There are certain articles that have become rather scarce in the market, and on which the price, without that process of handling, would increase very rapidly. Our arrangements were made with the Food Administration to handle those particular items, and they called upon the trade to turn over to the Army a certain percentage of their packs, as canned goods were one of the biggest items.

It was quite evident that there was to be a shortage in the pack of peas and tomatoes, and so the dealers were asked to save a certain

percentage for the Army and the Navy, and they did so, and a price was fixed on them which was considered fair and just, and we pay that price.

Mr. ANTHONY. Who fixed the price?

Col. GROVE. It was fixed by a committee. Primarily, it was fixed by the Federal Trade Commission, but they ceased to fix the prices in October, and after that a committee consisting of a member of the Food Administration, a representative of the Army and of the Navy, and a representative of the Federal Trade Commission fixed the price. They went into the costs, and there was also present a representative of the particular industry affected. If we were fixing the prices on salmon there would be a representative of the salmon industry present. That committee went over everything in connection with the costs, and agreed on a price which should be paid.

Mr. ANTHONY. Were the prices agreed upon satisfactory to all parties in every case, and were they or not higher than the market price?

Col. GROVE. In every case they were lowered. The prices fixed were satisfactory to all the representatives of the industry present, but we had some individual protests later.

Mr. ANTHONY. Are you satisfied that the prices are lower than you could have obtained under the system of securing sealed bids?

Col. GROVE. I am.

Mr. ANTHONY. How do you obtain your beef supply?

Col. GROVE. That is obtained by competitive bids.

Mr. ANTHONY. Do you have competition?

Col. GROVE. We have what appears to be competition, as we have different prices.

Mr. ANTHONY. Do they vary much?

Col. GROVE. They vary greatly. There is a great variation in the price of beef as between the different cantonments. In the month of November they ranged in price from about 4 cents to a maximum of 20 cents, and, of course, the freight rate was nothing like that.

Mr. ANTHONY. Where was the cheapest beef?

Col. GROVE. In that month the cheapest beef was at Camp Devens, and one of the highest prices we had was near Chicago, at Camp Custer.

Mr. ANTHONY. Can you put into the record the prices paid for beef at the various cantonments?

Col. GROVE. Yes, sir.

(The matter referred to is as follows:)

Prices of fresh beef at posts, etc., fiscal years 1917-18.

[NOTE.—The price of beef not shown for posts of Central Department. No prices available for 1918.]

	Price per pound.			Price per pound.	
	1917	1918		1917	1918
Eastern Department:			Eastern Department—Continued.		
Dupont, Fort, Del.....	\$0.1245	\$0.1694	Monroe, Fort, Va.....	\$0.1171	\$0.1560
Hamilton, Fort, N. Y.....	.1167	.1640	Myer, Fort, Va.....	.1179	.1593
Hancock, Fort, N. J.....	.1171	.1496	Niagara, Fort, N. Y.....	.14	.1695
H. G. Wright, Fort, N. Y....	.1195	.1667	Ontario, Fort, N. Y.....	.1228	.1678
Howard, Fort, Md.....	.1198	.1642	Plattsburgh Barracks, N. Y..	.1243	.1720
Jay, Fort, N. Y.....	.1249	.1584	Porter, Fort, N. Y.....	.1299	.1693
Madison Barracks, N. Y.....	.1348	.1787	Slocum, Fort, N. Y.....	.1191	.1661

Prices of fresh beef at posts, etc., fiscal years 1917-18—Continued.

	Price per pound.			Price per pound.	
	1917	1918		1917	1918
Eastern Department—Continued.			Western Department—Continued.		
Storey, Fort, Va.....		\$0. 1535	Geo. Wright, Fort, Wash.....	\$0. 124	\$0. 177
Totten, Fort, N. Y.....	\$0. 1217	. 1614	Gibbon, Fort, Alaska.....	. 3333	. 40
Wadsworth, Fort, N. Y.....	. 1224	. 1667	Lawton, Fort, Wash.....		. 181
Water Reed Hospital.....	. 1129	. 1646	Liscum, Fort, Alaska.....		. 181
Washington Barracks, D. C..	. 1129	. 1642	McDowell, Fort, Cal.....	. 1069	. 1635
Washington, Fort, Md.....	. 1179	. 1637	Monterey, Presidio of, Cal....	. 1200	. 1575
Wood, Fort, N. Y.....	. 1220	. 1642	San Francisco, Presidio of, Cal.	. 1069	. 1536
Northeastern Department:			San Francisco, general hos-		
Adams, Fort, R. I.....	. 1235	. 1667	pital, Cal.....	. 1039	. 1375
Andrews, Fort, Mass.....	. 1196	. 1610	Rosecrans, Fort, Cal.....	. 119	. 1648
Banks, Fort, Mass.....	. 1196	. 1610	St. Michael, Fort, Alaska.....	. 3333	. 39
Baldwin, Fort, Me.....		. 1723	Stevens, Fort, Oreg.....	. 1399	. 1799
Constitution, Fort, N. H.....	. 1322	. 1697	Vancouver Barracks, Wash...	. 1369	. 1784
Ethan Allen, Fort, Vt.....	. 1192	. 1672	Ward, Fort, Wash.....		. 181
Greble, Fort, R. I.....	. 1235	. 182	Seward, W. H., Fort, Wash...		. 181
Heath, Fort, Mass.....		. 1610	Winfield Scott, Fort, Cal.....	. 1039	. 1475
Levett, Fort, Me.....		. 1598	Worden, Fort, Wash.....		. 181
McKinley, Fort, Me.....	. 1221	. 1598	Yellowstone, Fort, Wyo.....	. 135	. 16
Preble, Fort, Me.....		. 1598	Missoula, Fort, Mont.....	. 1135	. 136
Revere, Fort, Mass.....		. 1610	D. A. Russell, Fort, Wyo.....	. 1224	. 1642
Rodman, Fort, Mass.....	. 1235	. 16625	Southern Department:		
Standish, Fort, Mass.....		. 1610	Sam Houston, Fort, Tex.....	. 1141	. 1502
Strong, Fort, Mass.....	. 1194	. 1610	Bliss, Fort, Tex.....	. 113	. 1604
Warren, Fort, Mass.....	. 1196	. 1610	Clark, Fort, Tex.....	. 1323	. 1808
Williams, Fort, Me.....	. 1221	. 1598	Huachuca, Fort, Ariz.....	. 127	. 182
Southeastern Department:			McIntosh, Fort, Tex.....	. 126	. 169
Barrancas, Fort, Fla.....	. 1268	. 1689	Sill, Fort, Okla.....	. 113	. 1608
Caswell, Fort, N. C.....	. 1231	. 1657	Whipple Barracks, Ariz.....		. 1608
Crockett, Fort, Tex.....	. 1191	. 1360	Douglas, Ariz.....	. 122	. 16
Dade, Fort, Fla.....	. 1274	. 1715	Nogales, Ariz.....	. 1275	. 165
Jackson Barracks, La.....	. 1249	. 1499	Hawaiian Department.		
Key West Barracks, Fla.....	. 1159	. 1934	Philippines Department.		
McPherson, Fort, Ga.....	. 1187	. 1592	Miscellaneous stations:		
Morgan, Fort, Ala.....	. 1194	. 1632	Alcatraz, Cal.....	. 1069	. 1535
Moultrie, Fort, S. C.....	. 1191	. 1687	West Point, N. Y.....	. 1235	. 1658
Oglethorpe, Fort, Ga.....	. 1194	. 1673	Seattle, Wash.....	. 1355	. 183
Screven, Fort, Ga.....	. 1141	. 1592	El Paso, Tex.....	. 1129	. 159
Hot Springs, Ark.....	. 116	. 1697	Keough, Fort, Mont.....	. 14	. 165
Western Department:			Reno, Fort, Okla.....	. 112	. 1642
Baker, Fort, Cal.....		. 15	Augusta, Ga.....	. 1295	. 1682
Barry, Fort, Cal.....		. 15	Frankford Arsenal, Pa.....	. 1285	. 1625
Casey, Fort, Wash.....		. 181	Springfield Armory, Mass.....	. 124	. 1697
Columbia, Fort, Wash.....	. 1399	. 1799	Watertown Arsenal, Mass.....	. 1297	. 166
Davis, Fort, Alaska.....	. 1875	. 20	Watervliet Arsenal, N. Y.....	. 1295	. 1675
Flagler, Fort, Wash.....		. 181			

Hawaiian Department.—The cost of fresh beef during the fiscal year 1917 was \$0.127 per pound, while for the fiscal year 1918 it is \$0.145, showing an increase for all posts in the department of \$0.018 per pound.

Philippines Department.—The cost of fresh beef in the Philippines Department during the fiscal year 1917 was \$0.095 per pound, which is the same as for the fiscal year 1918. The fresh beef required in the Philippine Islands during the fiscal year 1918 is being procured f. o. b. Government vessel, Tsingtan, China, and is being transported by the Government.

Mr. OLNEY. Might not the variation in price at Camp Devens be due to the supply of native beef?

Col. GROVE. Not entirely.

Gen. SHARPE. Largely.

Mr. ANTHONY. Have you had corn products in the ration in the Army?

Col. GROVE. There is no corn product specified. We have corn meal as a part of the ration and the soldiers eat it or not, as the mess sergeant sees fit.

Mr. ANTHONY. Do they use much corn meal in the Army?

Col. GROVE. They have not used it in recent months, but it is because it has been hard to obtain. They have used corn meal in the place of wheat.

Mr. ANTHONY. Do you regard corn bread as a good part of the ration?

Col. GROVE. Yes; I do.

Gen. SHARPE. I would like to say in that connection that I was speaking recently with a member of the Food Administration about the use of corn meal in making bread, substituting it for part of the flour, and suggested that that should be taken up as a conservation idea, and told them what we had accomplished in the different bakeries in the camps, and he gave me the impression that he did not think it was advisable to urge the more extensive use of corn meal, because the consumption was about up to the mill production capacity of the country.

I mentioned that the other night to a gentleman who is well informed on allied subjects, and he said he did not think that was right, because he knew that in the alcohol-producing district in Peoria all the mills there have their corn meal in connection with it, and while they can not make any more alcohol, they can still grind corn meal.

Mr. ANTHONY. The reason I asked the question was because we are trying to conserve the use of wheat, and I wondered if the Army was using a proper proportion of corn, because of the fact that the American soldier likes corn meal, and it seemed to me there was no reason why he should not get it.

Gen. SHARPE. We are using it in the bread; almost all the bakeries are using it.

Mr. ANTHONY. In regard to the grades of flour, have you lowered your requirements in regard to white flour; that is, do you accept the coarser flour now in which you use a larger percentage of grain than you used to.

Col. GROVE. The flour standard adopted by the Food Administration itself is what the Army was using before the war.

Mr. ANTHONY. So your people feel that they are following closely the standard set by the Food Administration?

Col. GROVE. We use that same flour now.

Mr. ANTHONY. So when they lowered the standard, the Army standard would go with it?

Col. GROVE. It will, but this far that has not been necessary.

Mr. ANTHONY. You take a so-called lower standard of flour, and it contains more nutriment, does it not?

Col. GROVE. It depends on how you work it.

Gen. SHARPE. It is a question as to the amount of digestible nutriment in the flour. Take, for instance, some of the patent flours, while they really contain less proteids than flour made from whole grain, the proteid which is in that patent flour is assimilated in the digestion when it is not in the case of the whole-wheat flour, because it is attached to the bran, and substances like that, which simply irritate the intestines and pass out without being digested.

Mr. ANTHONY. The ration which you have given to the committee does not represent all that the soldier gets for his subsistence, does it?

Gen. SHARPE. No, sir.

Mr. ANTHONY. Through his system of company funds, he really enjoys a meal infinitely greater in variety than that which you set forth in the hearings, does he not?

Gen. SHARPE. Yes, sir.

Mr. ANTHONY. To what extent is the ration increased in the Army in that way, in your opinion.

Gen. SHARPE. We found by numerous investigations in the past, with the smaller companies as they existed at that time, that they would expend about \$50 a month, on an average, for the company messes over and above the ration allowance.

Mr. ANTHONY. They get butter and milk?

Gen. SHARPE. They get additional butter and milk.

Mr. ANTHONY. Do you supply butter and milk in the ration?

Gen. SHARPE. Yes, sir; a small quantity of milk and butter, the milk being intended to be cooked in the coffee. It is not given for anything except for that purpose.

Mr. ANTHONY. So, it is a fact, as I believe Mr. Kahn brought out, that there is little or no complaint in regard to the quality or the quantity of the ration now being furnished.

Gen. SHARPE. No, sir.

Mr. KAHN. You say that the company funds can buy additional commodities?

Gen. SHARPE. Yes, sir.

Mr. KAHN. How are those funds saved?

Gen. SHARPE. Through the post exchange.

Mr. KAHN. Through the ability of the mess sergeant in saving money?

Gen. SHARPE. They can save it on the ration, yes, sir.

Mr. KAHN. If they have an excellent mess sergeant, he can probably save a good deal during the month, and the company gets the benefit?

Gen. SHARPE. Yes, sir.

Mr. KAHN. And then it also comes from the so-called post exchanges?

Gen. SHARPE. Yes, sir.

Mr. SHALLENBERGER. You spoke about purchase of meats for the cantonments, and I implied from what was said that perhaps there was not any real competition. Have you experienced anything like this in your bidding:

I was at one time a member of a board that purchased the supplies for the State institutions in Nebraska, and we had to furnish the meat for those institutions. Four principal packing companies bid every quarter for the meats, and there were always four different bids, and they all varied in price; but one company was always the lowest, so they got all the contracts at that time. When the next time came for bidding for those meat supplies, one of the other companies was the lowest, and they got the contracts, and by the time we had gone around through the year there had been apparent bidding, but we were sure there was no real competition at all. Have you experienced that? Does one packing house get the contract for the meat at one of your cantonments?

Col. GROVE. Yes; they run that way. It is quite natural, however, that when they get at one of those places and get their force estab-

lished to handle it at that particular place that they can handle it more economically than the other houses.

On the 1st of January, because of the very great advance in prices, the Quartermaster General's office in Washington undertook to control the awards of the contracts for all that beef, so that all bids are now submitted to Washington before being let, and the attempt is now made to get together on the matter and see what the trouble is.

Mr. SHALLENBERGER. Do you think you will arrive at any reduction in the price of meat?

Col. GROVE. When we opened the bids this month we found that there had been a greater rise in prices of the beef than the rise of the price of beef in Chicago would warrant, and we asked the reason for that rise. We wrote letters to the packers asking why there was that rise in price, and we have received replies from none of them as yet.

Mr. SHALLENBERGER. Has the investigation started by Mr. Heney had anything to do with your purchases?

Col. GROVE. I think that is entirely outside.

Mr. ANTHONY. In purchasing your beef for the cantonments, do you buy the whole carcass or just the hind quarter?

Col. GROVE. The whole carcass.

Mr. ANTHONY. That is more economical, of course?

Col. GROVE. Yes, sir.

Gen. SHARPE. Perhaps the committee would like to know about the price of beef in the Philippine Islands. The cost of beef in the Philippine Islands during the fiscal year 1913 was 9½ cents a pound and it is the same for this year. The beef there is obtained by Government vessels going to Tsing-Tao, in China, and bringing it back. That was a plant built there by the Germans, and after the Japanese had captured the place we made arrangements to go there and get this beef from a corporation which has it. The cattle are smaller than the ones we ordinarily use, but they are very good healthy cattle.

The CHAIRMAN. There has been no increase in the price of beef in that locality during the last year?

Gen. SHARPE. Not over there. That is because we are buying it from the same place. There had been considerable advance while we were getting it from Australia, and then, during the first year of the war we had considerable difficulty because of an embargo placed on the shipment of any beef from Australia. On two occasions we had to go to the State Department to get the British Government to release the embargo for us, and it was done with the distinct statement that it would only be used for our troops.

The CHAIRMAN. Does the Government continue to pay a tariff on its own products used for the Army and imported to the Philippine Islands from foreign countries?

Gen. SHARPE. Yes, sir; it does.

Mr. KAHN. In reference to the beef you get from Tsing-Tao, are the abattoirs there inspected?

Gen. SHARPE. Yes, sir.

Mr. KAHN. I know when they undertook to send pork products from China to the Philippine Islands some years ago there was great

complaint made that the abattoirs were very insanitary, and that the products were not inspected as the products from Australia and the United States were inspected. You have no trouble of that kind at Tsing-Tao?

Gen. SHARPE. No, sir; not at all. The plant at Tsing-Tao, we understand, is very much up to date.

Mr. ANTHONY. Is it still operated by the German company?

Gen. SHARPE. No, sir; the Japanese have taken it over.

Mr. SHALLENBERGER. What is the opinion of your department, General, as to getting the best price upon this beef, if under the circumstances you do not think you have real competition? Would it not be better to apply the same principle you have in other cases and ascertain the cost of the meat and fix a fair price, rather than to have so-called competition?

Gen. SHARPE. That matter is being discussed with this board in connection with the Food Administration, and the Food Administration had their agent to look into that matter very carefully, and we expected to go on that basis on the 1st of December; but he decided, and we concurred in his opinion, after a careful consideration of the facts in the case, that the time was not quite ready, but it is being looked into very carefully.

Mr. SHALLENBERGER. I realize that it is a difficult matter to determine rapidly. I know in Nebraska we attempted to investigate the price on the outside and find out whether or not we were getting a fair price, because we knew we were getting no competition, but we could not ascertain, with our limited means, sufficient data to inform ourselves.

Mr. ANTHONY. What is the Government price for beef in the Missouri Valley?

Col. GROVE. I do not know, in any particular case; it will probably run along there at about 16 cents for the entire carcass.

JANUARY 10, 1918.

Memorandum for Col. Grove:

Will you please furnish the estimates branch for hearings, Army appropriations, fiscal year 1919, as per request of the committee, statements showing prices of beef at the various cantonments and contract price for beef at posts in Nebraska, Missouri, and Kansas.

CHAS. P. DALY,
Captain, M. S., Q. M. C.

[First indorsement.]

WASHINGTON, D. C., January 12, 1918.

To the Administrative Division:

1. Forwarded; instructions complied with.

By authority of Acting Quartermaster General:

WM. R. GROVE,
Lieutenant Colonel, Q. M. Corps.

Comparison of prices paid on beef (fresh) between Army cantonments and Forts Riley and Leavenworth.

	Prices on beef (fresh).			January.
	October.	November.	December.	
National Army camps:				
Custer.....	\$0. 1664	\$0. 1523	\$0. 1574	\$0. 1610
Devens.....	. 1386	. 1386	.....	.....
Dix.....	. 1433	. 1647	. 1647	.....
Dodge.....	. 1596	. 1467	. 1581	. 1614
Funston.....	. 1597	.....	.....	. 1654
Gordon.....	. 1495	. 1495	. 1661	.....
Grant.....	. 1641	.....	. 1559	.....
Jackson.....	. 1634	. 1634	. 1634	. 1634
Lee.....	. 1454	. 1519	. 1519	. 1664
Lewis.....	.....	. 163	.....	. 162
Meade.....	. 1454	. 1544	. 1544	. 1649
Pike.....	.....	. 1438	. 1697	.....
Sherman.....	.....	. 1519	.....	. 1623
Taylor.....	. 1492	.....	. 1538	. 1719
Travis.....	. 1768	. 1768	. 1768	.....
Upton.....	. 1457	. 1573	. 1573	.....
National Guard camps:				
Beauregard.....	.....	.....	.....	. 1725
Bowie.....	. 1375	. 1595	.....	. 1785
Cody.....	.....	. 1675	.....	. 169
Doniphan.....	. 1646	. 1646	. 1646	. 1646
Fremont.....	. 1373	. 1425	. 1435	.....
Greene.....	. 1549	.....	.....	.....
Hancock.....	.....	.....	.....	.....
Kearny.....	. 1598	.....	.....	. 182
Logan.....	. 1695	. 1597	. 1597	.....
MacArthur.....	. 1707	. 1647	. 1647	. 1647
McClellan.....	. 1463	. 1463	.....	.....
Sevier.....	. 1441	. 1441	.....	.....
Shelby.....	. 1444	. 1568	. 1568	. 1740
Sheridan.....	. 1428	. 1428	. 1723	.....
Wadsworth.....	. 1497	. 1603	. 1603	.....
Wheeler.....	. 1436	. 1436	. 1711	.....
Fort Riley.....	. 1491	. 1556	. 1556	. 1620
Fort Leavenworth.....	. 1520	. 1515	. 1545	. 1617

JANUARY 12, 1918.

Memorandum for Col. Grove.

Attached herewith is a comparison of prices paid for beef (fresh) for four months beginning October, 1917, at the Army cantonments and Army posts in the Middle West, as per your request.

Complete figures for the cantonments are not available, but a definite idea of the prices being paid can be ascertained. Some of the prices which are not shown are the same as were paid the month previous, being covered by the same contract. Where there is no definite report to this effect such figures are omitted.

SEALE B. JOHNSON,
Lieutenant, Quartermaster Corps, N. A.

Mr. ANTHONY. You use a pretty high-grade animal?

Col. GROVE. It is a good grade animal.

Mr. ANTHONY. It must be grain fed?

Col. GROVE. Not alone.

Mr. ANTHONY. What weight, do you recall?

Col. GROVE. A minimum weight of 450 pounds.

Mr. ANTHONY. And the whole carcass?

Col. GROVE. And the whole carcass, yes, sir.

Mr. ANTHONY. I think I saw in the paper the other day that Swift & Co. had sold their supplies at 14 cents out there.

Col. GROVE. They might have done so.

Mr. ANTHONY. That would imply that you are paying more out there than they are selling their products for here.

Col. GROVE. But, on the other hand, we had a price in Massachusetts of 13 cents, and it would be very difficult to make a comparison without getting the facts together in regard to the same date; but that can be done, and we can put in the record those two prices.

Mr. ANTHONY. It would be very interesting to the cattle raisers in our part of the country to know what the Government pays.

Col. GROVE. I do not recall exactly what we are paying at those posts.

Mr. SHALLENBERGER. With reference to your answer to one of Mr. Anthony's questions, is it your understanding that the meat sold in Massachusetts has probably been produced and slaughtered in the West and shipped to Massachusetts?

Col. GROVE. Yes, sir.

Mr. ANTHONY. And yet we find that it is sold at a higher price in the meat country than on the Atlantic coast.

Col. GROVE. Yes, sir.

Gen. SHARPE. In reference to the point in regard to the price, we had several instances that have happened where we have had certain amounts of various canned products allocated to us from certain canneries, but they have declined to sell the goods to us at the figures named. We then took the proper authority from the Secretary of War to commandeer the goods, under the national defense act.

Mr. SHALLENBERGER. I suppose they then yielded to your price.

Gen. SHARPE. They had to, or go to jail.

Mr. ANTHONY. Are you buying any embalmed beef or canned beef?

Gen. SHARPE. We are not buying embalmed beef.

Mr. SHALLENBERGER. I was informed by the Secretary of War that in every case where they had encountered this disposition to refuse to give the better price, a threat to commandeer was sufficient.

Col. GROVE. I think after that conversation with the Secretary a few cases have arisen. There have been three or four cases, but as a rule, they give in.

Mr. QUIN. Does the Food Administration have any control over your department in this matter?

Col. GROVE. None whatever; it is simply a matter of cooperation.

Mr. FIELDS. What percentage of the meat products is canned?

Col. GROVE. I can just roughly state that for use in the United States it is not over 5 per cent. Abroad, it is heavier.

Mr. SHALLENBERGER. This committee put the provision in the law under which the Secretary acts. He has exercised that law apparently, or threatened to exercise it considerably. Have there been instances that have arisen where the power has been exercised and he has compelled these men to accept the price, where apparently nothing has been done to these men? Have they made complaint?

Col. GROVE. In the cases where we actually commandeered, we turned the case over to the Federal Trade Commission to investigate the costs, and it fixed a fair price over the cost of production. That is the rule we followed in those cases.

Gen. SHARPE. The law says that we shall take them, and price fixed shall be fair and just.

Mr. SHALLENBERGER. I understand that, but I wondered whether there had been a good deal of complaint by these men as to the price.

The CHAIRMAN. They have a right to go into the courts.

Col. GROVE. Some little difficulty has been had this year in reference to these articles. After the price has been fixed, the market has advanced very considerably in the commercial world, and the dealers handling the articles did not want to give up their percentage of the pack, and in some cases it was necessary to resort to a threat, and in one or two cases to actual commandeering. That was done more as a protection against the other packers, because we felt it was not fair to let some dealer who had said he would let us have a percentage of the pack to go out into the markets and sell those goods at higher prices.

Mr. McKENZIE. I suppose they put their argument on patriotic grounds?

Col. GROVE. We have a great deal of that advanced, and a great deal of it was meritorious in the canning industry. They have done well by us.

Mr. KAHN. Is this canned beef similar to the bully beef of the English Army?

Col. GROVE. I presume it is similar.

Gen. SHARPE. I think the term "bully beef" comes from the word on the label on the can.

Mr. ANTHONY. Do you furnish the Army in France with American beef?

Gen. SHARPE. We are shipping beef to them from here.

Mr. ANTHONY. They can not get beef over there?

Gen. SHARPE. No.

Col. GROVE. They buy their vegetables over there in France and England, their fresh vegetables.

Mr. TILSON. Do you use much canned beef hash in the camps?

Col. GROVE. No, sir.

Mr. TILSON. It is too bulky, is it?

Col. GROVE. Yes, sir. It is not necessary. The troops have been making so much hash themselves, in order to use up the different parts of the beef, that they do not want any hash in cans, and only use it when traveling.

Mr. GARRETT. Do you know anything about the process by which this committee you referred to arrives at a price which is just and fair? Do you know what investigation they make in order to arrive at that, and how they get at it, and what kind of a profit they arrive at as being just and fair?

Col. GROVE. The committee arrives at that by having the Federal Trade Commission in advance ascertain the costs of production in various parts of the United States, and then the committee gets together with a representative of the industry concerned, and agree as to what shall be considered a fair price for that particular product. That price must vary, on account of the article produced. For instance, where a canner packs but one item in a year, he only has the use of his canning factory for one month, he naturally must get a little higher price than the man who continues to pack some other line of goods the year round, because he has capital invested all the year, and he must get something out of it. There is no fixed rule for governing that.

Mr. GARRETT. Let us take the beef proposition. For instance, suppose we take a packer in Chicago and one in Fort Worth, Tex.;

do they estimate, in considering the cost of production, that that cost is the cost of the beef to the packing house in its pen, the cost on foot.

Col. GROVE. We have not had any investigation made of those costs, and that is one of the things that is developing in the matter of making a fixed price on beef.

Mr. GARRETT. I would make the suggestion that in estimating that cost, when they fix the price that they consider the price that the packing house pays for the beef and the freight, then I would like them to go into the further deductions to be taken into consideration, that the people should make in arriving at the net cost of the whole carcass, by what they get for the hides and the tallow and all of those things. There is nothing lost in the carcass nowadays, and you should take that into consideration in order to arrive at what credit should be given to these beef people and then find out what would be a reasonable profit on that, when you buy it and take it away.

Col. GROVE. That brings out one of the great difficulties you have. When you kill a pig out there, you can not possibly state by any process of analysis known to man, through the various processes he goes through in the packing house so that any estimate made on that must be in the rough.

Mr. GARRETT. What I meant was this: For instance, you are taking an average?

Col. GROVE. Yes.

Mr. GARRETT. You say the variation in beef is from 450 to 600 pounds. You know about how many 450-pound and how many 600-pound beeves you use. It is easy for your committee to ascertain what the packers are paying for the cattle on the market at that place, because they go to the pens and buy them, and they pay so much a pound for this beef that weighs 450 pounds, and so on up. They pay a different price, and you can get those prices and then when the deductions come they are practically the same on a 450-pound beef as they are on a 600-pound beef. He gets almost as much off of a 450-pound beef as off of a 600-pound beef.

Mr. ANTHONY. To continue Mr. Garrett's question further, all of which should bring your committee to further look into the fact that the western cattle producer has no competitive market in which to sell his products, and that the price at the western packing centers is fixed by the packers, and if there is an oversupply of cattle the price goes down, and if the farmers do not let go of their animals there is a scarcity, and the price goes up.

Mr. GARRETT. A very large cattle grower in Texas told me last fall that there had not been for a long while absolutely any competition anywhere among packing people, because if he shipped a carload of 1,200-pound steers to Fort Worth and they offered him a certain price for them, and he did not feel he would be justified in taking that price and ordered those steers shipped to Chicago, he would be offered in Chicago just a little bit less than he was offered in Fort Worth, or such a price plus the freight that he would lose just enough to make him wish he had sold them in Fort Worth. In arriving at a reasonable and fair price for the beef for the soldiers, if there is a monopoly in there, you want to find out what it is.

Col. GROVE. Perhaps that can be ascertained. The Federal Trade Commission is the body to go into those details.

Mr. GREENE. Is not exactly the same economic problem associated with the so-called investigation of the beef prices in the supply of beef for civil life?

Col. GROVE. Yes, sir.

Mr. GREENE. This is no new problem.

Col. GROVE. No. At any other time except one like this we would not be able to proceed on such a basis except by direct authority of Congress.

Mr. ANTHONY. Is it true that the Navy is buying its supplies in the open market, and not through the Food Administration?

Col. GROVE. They are buying exactly as we are buying.

Mr. HARRISON. I was told they bought by advertising, by advertising for bids, and that they did not buy through the purchasing board.

Col. GROVE. The Army does in most of their purchases buy in the same way. It is only in the case of articles of which there has been a great scarcity in the market that the Food Administration has entered into the calculation at all. But in every case where the Army handles a product through the Food Administration, the Navy does also.

Mr. HARRISON. I understood that this purchasing board was a part of the Food Administration.

Col. GROVE. They have a board composed of one member of the Food Administration, a representative of the Federal Trade Commission, and representatives of the Army and the Navy.

Mr. HARRISON. That is called a purchasing board?

Col. GROVE. A Food Purchasing Board.

Mr. HARRISON. Does that board purchase supplies for the Army?

Col. GROVE. It only acts as a sort of consulting board; it does not purchase anything directly. It only meets to consider questions concerning the allocation of those products and the fixing of a price on those products, and then the Army and the Navy each buy separately. I said we fixed what is considered a fair and a just price. We really fix a price beyond which we will not go, but if anybody has a product to offer at a price lower than the price which we fix, we are glad to receive it.

Mr. HARRISON. I have in mind an incident of this character: A canning concern was notified by this purchasing board that they wanted 18 per cent of their output for the Army, and they were forbidden to sell, and yet if their goods are not bought by the Government they have to hold them at their own risk. They were obliged to put them in some depository for safe-keeping. When I went to see about the matter I was told that the Navy Department did not buy in that way, and I went to the Navy Department to find out exactly how they do buy, I saw Paymaster Hancock, and he told me the Navy did not buy through that board.

Col. GROVE. The Navy has been handling it exactly as the rest of us have. I think there must have been some misunderstanding, because we all meet on the same board, and they have all been allotted in the same way since I have been here, for the last three months.

Mr. HARRISON. I was surprised to find out that the Navy had its own methods and the Army had its own methods.

Col. GROVE. There was some talk about that, but I am absolutely positive that it is being done and has been for a long time. There is no other way to do it.

The Navy can not buy cheaper; if anybody could buy them cheaper the Navy would, but you can not get an offer cheaper than the fixed price, so that the Navy has either to do that or pay a higher price, which they do not do.

Mr. HARRISON. How is the requisitioning done? They were notified that they were not to sell that product.

Col. GROVE. I do not understand that particular case.

Mr. HARRISON. I have seen statements in the press that 18 per cent of the output of these different concerns have been requisitioned, but at the same time the Army does not seem to buy.

Col. GROVE. Some of the allotments were slow in being made, and there was probably some difference of opinion between the Food Administration and the party concerned, and in some cases there have been a difference in the examination of samples. Some articles were sold according to samples, and the goods were inferior to what they had been represented to be. Then we had some reinspection, and we finally got satisfactory goods.

Mr. OLNEY. In other words, they did not want to do business with the Government?

Col. GROVE. Yes, sir.

Mr. HARRISON. The person I have reference to had actually sold the stuff at a much higher price than the Government paid, and had to hold the stuff in a depository.

Mr. ANTHONY. Is the Government paying its bills promptly for the purchase of supplies?

Col. GROVE. I think I can say we are improving greatly in that respect.

Mr. ANTHONY. I have had an instance called to my attention where the Government allows four months' coal bills at a military post to go unpaid. Why should there be such a situation?

Gen. SHARPE. There ought not to be such a situation, because the money is placed to the credit of the officer making the purchase.

Mr. KAHN. If you will allow me, it frequently happens that your appropriation runs out, and I know cases of merchants who have sold the Army goods and who have had to wait for months to get their money, and had to borrow money from the banks to do business while Congress was passing the appropriation bills.

Mr. ANTHONY. The case I referred to has been a chronic condition for the past year where the Government has allowed its bills to accumulate for three or four months. Complaint was made to me by the Carr Coal Co., of Fort Leavenworth.

Mr. KAHN. Is that a case where the money has already been appropriated?

Mr. ANTHONY. They stated they had to borrow money to pay their employees.

Mr. OLNEY. Is it not a fact that the soldiers are complaining about not getting pay which is due them and that they have not received their pay. I have seen individual complaints of soldiers who have not received the pay which is due them.

Col. GROVE. So far as that relates to food products, I would like to state that this board has had made the same rule that prevails in commercial life, that if the Army will pay its bills within 10 days they get

a reduction of 2 per cent on the cost, and that puts it right up to the officer to either lose 2 per cent for the Government, or get that discount with the payment, and we think if they will do that, with the approval of the Quartermaster General, that ought to help it along.

Mr. GARRETT. You mean by that if the paymaster at a particular place does not get his bills out on the 10th of the month he is charged up 2 per cent?

Col. GROVE. The individual officer is not charged, but that is the rule, that the Government does not get the reduction unless the bill is paid within the 10 days.

Mr. GARRETT. I thought you said the officer was penalized?

Col. GROVE. I do not think that has been the case.

Mr. ANTHONY. Otherwise the Government gets a price of 30 days net?

Col. GROVE. It does.

The CHAIRMAN. I notice one thing in connection with this item that needs some explanation, and that is that the total amount is over \$100,000,000 less than it was last year.

Gen. SHARPE. The estimates submitted last year were for 2,093,000 men. This estimate is for 1,612,245 men.

The CHAIRMAN. Did the Committee on Appropriations give you the full amount you estimated for for 2,000,000 men?

Capt. DALY. No, sir.

The CHAIRMAN. I am talking about the difference between what you actually got from the Committee on Appropriations and what you are asking for.

Capt. DALY. That is because that was based on a larger number of men.

The CHAIRMAN. Did you not get a deficiency of \$133,000,000 in June and one on October 6 for \$250,000,000?

Gen. SHARPE. Yes.

The CHAIRMAN. That makes the \$400,000,000 I am talking about. The total amount you got was over \$400,000,000 last year, and you are asking for over a hundred million dollars less this year.

Capt. DALY. The first deficiency estimate submitted was based on an army of 1,078,000 men. The second deficiency estimate was based on an army of 2,033,000 men. That is, the second deficiency estimate covered the difference between 1,078,000 and 2,033,000 men, under instructions from the War Department to submit such an estimate. This estimate, submitted under instructions from the War Department, covers an army of 1,612,245 men.

Mr. TILSON. You do not expect to have less men under arms in 1919 than you did in 1918?

Capt. DALY. No, sir. If we have to pay more than 1,612,245 men, we would have a deficiency.

Mr. TILSON. Will you not charge up a large surplus for 1918, if you get the hundred million more you are asking for for 1919?

Capt. DALY. No; because, with the purchases for 1918, we had to acquire a larger stock than we will have to acquire in 1919. Then we had a great many initial purchases in the way of clothing and equipment that will not obtain in 1919. It will just be replenishment in 1919 or maintenance.

The CHAIRMAN. That is what I am trying to get at. Of course, that would have to be explained on the floor of the House. Can you put into the record a statement showing these initial purchases

which you had to make last year, which you will not have to make this year?

Capt. DALY. Yes, sir.

Mr. GREENE. So that the figures, apparently based on 1,612,245 men, are really based on the necessities which faced you last year, rather than for a fixed number of men?

Mr. FIELDS. The explanation is that the bulk of your purchases for 1918 were initial purchases, while the bulk of purchases for 1919 will be replenishment purchases?

Capt. DALY. For some of the items. In 1918 there was the original equipment, plus maintenance. For 1919 it is practically all maintenance, unless the Army is increased to a larger number than 1,612,245. If that is done, the funds asked for in this estimate will not be sufficient.

Mr. TILSON. There is a considerable proportion of that reserve food that will be carried over from 1918 to 1919?

Gen. SHARPE. About four months' supply.

Mr. TILSON. You will want to carry over just as big a reserve stock in 1919, will you not?

Capt. DALY. It will be about four months' reserve stock, purchased out of the 1918 purchases that will be available for 1919.

The CHAIRMAN. Then this entire \$401,000,000 that Congress gave you at the last session will all be expended?

Capt. DALY. Yes, sir.

The CHAIRMAN. All of that will be necessary to be used?

Capt. DALY. Yes, sir.

Mr. SHALLENBERGER. Has it been expended for subsistence?

Capt. DALY. Yes, sir.

Mr. SHALLENBERGER. Is this item combined with any other item?

Capt. DALY. It is combined with regular supplies of the Army, transportation and incidental expenses, and water and sewers, but we keep our allotments for subsistence and our disbursements separate.

Mr. SHALLENBERGER. You have authority to do it, but you have not authority to use it for any other purpose?

Capt. DALY. It is accounted for by the officer in the field, who reports the expenditures as one fund.

Mr. SHALLENBERGER. I want to know whether you did really use it for any other purpose.

Capt. DALY. No, sir. It is confined to subsistence.

Gen. SHARPE. There is still a balance of \$112,700,000.

Mr. SHALLENBERGER. Unexpended?

Gen. SHARPE. Unexpended; yes, sir.

Mr. KAHN. At the outbreak of this war, had you any reserves of any kind in your department?

Gen. SHARPE. Practically none.

Mr. KAHN. They had been used up during the Mexican trouble?

Gen. SHARPE. Yes, sir.

Mr. ANTHONY. Were you referring to food supplies?

Mr. KAHN. All kinds of quartermaster's supplies.

Capt. DALY. We had some reserves in equipment other than clothing. We had sufficient of what is known as equipment C, other than clothing, wagons, and harness.

Mr. KAHN. Of what does that consist?

Capt. DALY. That consists of axes, picks, rakes, shovels, stationery, typewriters—all of that class of supplies.

Mr. TILSON. Mostly commercial articles?

Capt. DALY. Yes, sir.

Gen. SHARPE. We bought, in June, 1916, when the Mexican mobilization was started, supplies amounting to \$4,100,000, for 48 divisions.

Capt. DALY. We bought reserve stock for 48 divisions, in addition to the stock at the depots already carried. We purchased supplies for 48 divisions—this equipment C—all articles other than clothing, harness, and wagons.

Gen. SHARPE. Those were in the depots, but when the National Army was called out, and the shipments were made——

Mr. ANTHONY. If my memory is correct, before the outbreak of the European war, the general staff officers asked this committee for reserve equipment for an initial army of approximately 500,000 men. I think this committee has always made appropriations with the idea of providing a reserve stock of equipment for an army of 500,000 men. Was that equipment created, and did it exist?

Gen. SHARPE. No, sir; we never got appropriations for it.

Mr. KAHN. If you will remember, the committee never gave the amounts that they asked for reserve.

Mr. ANTHONY. I remember the committee did give the amounts specifically in regard to equipment. I know we gave it, because we had Gen. Aleshire's statement that he was permitted to purchase 4,000,000 yards of uniform cloth, in addition to what he had asked for, and we gave him that authority, and I suppose in doing that we were providing 500,000 surplus uniforms. Did we ever get the uniforms?

Gen. SHARPE. We never got the appropriation.

Mr. ANTHONY. How were those uniform used; by recruits on the Mexican border?

Capt. DALY. We did not get the appropriation.

REGULAR SUPPLIES, QUARTERMASTER CORPS.

The CHAIRMAN. The next item is, "Regular supplies, Quartermaster Corps," and you are asking for \$203,031,311. You had \$240,250,114.23, and since this estimate was made you have put in a supplemental estimate of \$28,722,244.54, making the total you are asking for \$231,754,055.54.

Capt. DALY. That supplemental estimate is to procure the stock which will take longer than six months to procure for an army of 3,000,000 men, and this regular estimate is for an army of 1,612,245 men.

The CHAIRMAN. You say the original estimate is for an army of 1,612,245 men, and the supplemental estimate of \$28,222,244.54 is to take care of supplies that will take longer than six months to procure, in the event the Army should be increased to 3,000,000 men?

Capt. DALY. It is to procure supplies that it will take longer than six months to procure, for an army of 3,000,000 men.

The CHAIRMAN. Then that makes the item a little less than it was last year?

Capt. DALY. The same explanation applies to this estimate, only to a larger extent, as applied to the estimate for subsistence.

Mr. TILSON. In general, what class of articles would it require more than six months to procure?

Capt. DALY. Field ranges, field bakeries, and rolling kitchens and bake ovens. This estimate for \$28,722,244.54 is based on that, and it also includes ice machines for France and laundries for France.

Mr. SHALLENBERGER. You must have a reserve supply from this appropriation for several months, the same as in the other?

Capt. DALY. Yes, sir; we have about a three months' supply under this.

Mr. KAHN. General, in the Army and Navy Register of the 5th of this month, there is an article which calls attention to the fact that all the tents over near Camp Mills, which were occupied by the National Guard Division, comprising the Rainbow Division, have been ruined because when that division was sent to France the tents were left there without caretakers, and without anybody to look after them, and that they are now in shreds, and that they constitute a loss to the Government of about \$300,000. Do you know anything about that?

Gen. SHARPE. I know of a communication being received to that effect in the office, Mr. Kahn, not stating the loss, but asking, in the first place, that steps be taken at once to conserve the property, and asking in the second place for an investigation as to who was responsible for the defective Government property. I do not know whether anything has been received back.

Mr. KAHN. Does that not come before your department for investigation?

Gen. GOETHALS. The Department Commander of the East has taken over the property, and the Inspector General told me he would get his report in my hands to-morrow morning.

Mr. KAHN. According to the article in the Army and Navy Register there seems to have been a serious case of neglect.

Gen. GOETHALS. There is no question about it.

Gen. SHARPE. It was scandalous. There was an old article of war that covered such cases, which said that any officer who suffers any Government property to be lost or destroyed should make good the loss and be dismissed from the service.

Mr. KAHN. Will you bring to this committee a copy of the Inspector General's report so that the committee may be advised on the subject?

Gen. GOETHALS. Yes, sir.

The CHAIRMAN. Will you put in the record, in connection with this item, a statement showing how much money you have expended, and how much you have contracted for under this item, to date, out of the amount appropriated last year?

Gen. SHARPE. Yes, sir. I have here, Mr. Chairman, a table to submit, with the notes.

The CHAIRMAN. We would be glad to have that in the record.

(The statement referred to and the details of the estimate are as follows:)

Estimate appropriation "Regular supplies, Quartermaster Corps," fiscal year 1919.

Deficiency act June 15, 1917.....	\$101,800,114.23
Deficiency act Oct. 6, 1917.....	125,000,000.00
Total.....	226,800,114.23

Regular supplies, Quartermaster Corps: * * * for furnishing heat and light for the authorized allowance of quarters for officers, including members of the Officers' Reserve Corps when ordered to active duty, and enlisted men, including enlisted men of the Regular Army Reserve and retired enlisted men when ordered to active duty; contract surgeons when stationed at and occupying public quarters at military posts; for officers of the National Guard attending service and garrison schools, and for recruits, guards, hospitals, storehouses, offices, the buildings erected at private cost, in the operation of the act approved May thirty-first, nineteen hundred and two: and buildings constructed under the authority of the Secretary of War by any organization for the promotion of the social, physical, intellectual, and military development of the troops in camp and in the field * * *.

RECAPITULATION.

Estimate fiscal year 1919—(Appropriation: "Regular Supplies.")

UNITED STATES AND PHILIPPINE ISLANDS.

Item No.	Purpose.	Appropriation fiscal year 1918.	Estimate for fiscal year 1919.			Estimate per capita 1,712,245 officers and men.
			Current requirements.	New construction.	Total.	
111	Care and protection.....	\$125,250.40	\$8,745,336.00	\$33,785.00	\$8,779,121.00	\$5.1273
112	Stoves.....	6,234.89	200,000.00	.....	200,000.00	.1169
113	Heating apparatus.....	443,478.50	.....	857,557.00	857,557.00	.3008
114	Ranges.....	29,919.00	760,000.00	.....	760,000.00	.4438
115	Cooking stoves.....	750.00	10,000.00	.....	10,000.00	.0058
116	Coffee roasters.....	.....	10,000.00	.....	10,000.00	.0058
117	Appliances.....	68,340.00	1,712,000.00	.....	1,712,000.00	.9940
118	Repairs and maintenance...	146,859.00	1,206,855.00	.....	1,206,855.00	.7047
119	Candles.....	14,650.00	786,000.00	.....	786,000.00	.4590
120	Matches.....	8,126.40	628,000.00	.....	628,000.00	.3667
121	Heat.....	2,875,821.81	55,784,067.00	.....	55,784,067.00	32.5794
122	Light.....	1,531,349.50	9,640,676.00	384,355.00	10,025,031.00	5.8549
123	Fuel for modern batteries...	155,600.00	200,000.00	.....	200,000.00	.1169
124	Engine supplies.....	22,280.00	50,000.00	.....	50,000.00	.0292
125	Post bakeries.....	19,772.00	41,907.00	11,250.00	53,157.00	.0310
126	Bake ovens.....	87,231.00	697,067.00	.....	697,067.00	.4071
127	Ice machines.....	6,300.00	.....	1,485,761.00	1,485,761.00	.8677
128	Ice machines, maintenance of	94,479.00	525,783.00	.....	525,783.00	.3070
129	Cold storage.....	82,696.00	259,784.00	.....	259,784.00	.1517
130	Ice for organizations.....	87,800.00	6,760,000.00	.....	6,760,000.00	3.9480
131	Ice for issue to office.....	9,200.00	140,000.00	.....	140,000.00	.0817
132	Ice for preservation of stores.	23,000.00	480,000.00	.....	480,000.00	.2686
133	Laundries, construction of...	5,200.00	617,017.00	6,062,250.00	6,679,267.00	3.9008
134	Laundries, operation of.....	8,141.00	639,922.00	.....	639,922.00	.3737
135	Laundry materials for general prisoners.....	9,875.00	32,000.00	.....	32,000.00	.0186
136	Laundry materials for applicants for enlistment.....	1,550.00	3,500.00	.....	3,500.00	.0020
137	Soap.....	72,586.00	3,900,000.00	.....	3,900,000.00	2.2777
138	Hire of employees.....	208,552.00	350,000.00	.....	350,000.00	.2044
139	Furniture for post schools...	1,712.00	1,000.00	.....	1,000.00	.0005
140	Textbooks.....	2,185.00	2,000.00	.....	2,000.00	.0011
141	Paper.....	385.00	300.00	.....	300.00	.0001
142	Equipment.....	12,051.00	45,000.00	.....	45,000.00	.0262
143	Instruments.....	.....	1,000.00	.....	1,000.00	.0005
144	Office furniture for officers' schools.....	.....	2,000.00	.....	2,000.00	.0011
145	Stationery for officers' schools.....	.....	.....	.....	.....	.....
146	Other authorized articles for officers' schools.....	.....	300.00	.....	300.00	.0001
147	Commercial papers.....	500.00	20,000.00	.....	20,000.00	.0116
148	Market reports.....	500.00	1,000.00	.....	1,000.00	.0005
149	Tableware.....	40,552.00	1,560,000.00	.....	1,560,000.00	.9110
150	Mess furniture.....	18,700.00	300,000.00	.....	300,000.00	.1752
151	Forage.....	6,710,000.00	79,010,000.00	.....	79,010,000.00	46.1441
152	Salt.....	6,859.50	78,000.00	.....	78,000.00	.0455
153	Vinegar.....	4,389.00	98,915.00	.....	98,915.00	.0577
154	Bedding.....	208,100.00	3,122,424.00	.....	3,122,424.00	1.8236
155	Seeds.....	1,000.00	5,000.00	.....	5,000.00	.0029
156	Implements.....	5,200.00	10,000.00	.....	10,000.00	.0058
157	Labor.....	500.00	5,000.00	.....	5,000.00	.0029
158	Expenses incident thereto...	750.00	4,000.00	.....	4,000.00	.0023
159	Straw.....	7,500.00	3,482,000.00	.....	3,482,000.00	2.0335
160	Stationery.....	120,230.00	8,782,000.00	.....	8,782,000.00	5.1289
161	Typewriters.....	24,530.00	3,062,000.00	.....	3,062,000.00	1.7882
162	Blank books.....	900.00	10,000.00	.....	10,000.00	.0058
163	Blank forms.....	32,500.00	250,000.00	.....	250,000.00	.1460
164	Certificates.....	1,100.00	10,000.00	.....	10,000.00	.0058
165	Printing.....	105,000.00	175,000.00	.....	175,000.00	.1022
Total.....		13,450,000.00	194,196,853.00	8,834,958.00	203,031,811.00	118.5763

Estimate fiscal year 1919 (appropriation "Regular supplies").

UNITED STATES.

Item No.	Purpose.	Appropriation fiscal year 1918.	Estimate for fiscal year 1919.		
			Current requirements.	New construction.	Total.
111	Care and protection.....	\$108,650.40	\$8,734,816.00	\$27,885.00	\$8,762,701.00
112	Stoves.....	0,234.89	199,900.00		199,900.00
113	Heating apparatus.....	443,478.50		857,557.00	857,557.00
114	Ranges.....	24,359.00	749,530.00		749,530.00
115	Cooking stoves.....	250.00	9,800.00		9,800.00
116	Coffee roasters.....		10,000.00		10,000.00
117	Appliances.....	60,000.00	1,708,000.00		1,708,000.00
118	Repairs and maintenance.....	139,999.00	1,200,170.00		1,200,170.00
119	Candles.....	12,000.00	783,350.00		783,350.00
120	Matches.....	5,976.00	625,870.00		625,870.00
121	Heat.....	2,767,004.81	55,667,248.50		55,667,248.50
122	Light.....	1,338,474.50	9,454,276.00	350,555.00	9,804,831.00
123	Fuel for modern batteries.....	100,000.00	169,400.00		169,400.00
124	Engine supplies.....	17,280.00	45,000.00		45,000.00
125	Post batteries.....	6,272.00	35,907.00	5,250.00	41,157.00
126	Bake ovens.....	83,231.00	690,567.00		690,567.00
127	Ice machines.....			1,474,861.00	1,474,861.00
128	Ice machines, maintenance of.....	4,479.00	426,543.00		426,543.00
129	Cold storage.....	7,696.00	145,284.00		145,284.00
130	Ice for organizations.....	85,000.00	6,756,200.00		6,756,200.00
131	Ice for issue to office.....	7,000.00	137,800.00		137,800.00
132	Ice for preservation of stores.....	18,000.00	455,000.00		455,000.00
133	Laundries, construction of.....	2,200.00	613,517.00	6,047,250.00	6,660,767.00
134	Laundries, operation of.....	5,141.00	636,922.00		636,922.00
135	Laundry materials for general prisoners.....	9,375.00	31,500.00		31,500.00
136	Laundry materials for applicants for enlistment.....	1,550.00	3,500.00		3,500.00
137	Soap.....	62,586.00	3,890,000.00		3,890,000.00
138	Hire of employees.....	138,552.00	280,000.00		280,000.00
139	Furniture for post schools.....	1,212.00	500.00		500.00
140	Textbooks.....	1,685.00	1,500.00		1,500.00
141	Paper.....	285.00	200.00		200.00
142	Equipment.....	11,051.00	44,000.00		44,000.00
143	Instruments.....		500.00		500.00
144	Office furniture for officers' schools.....		1,500.00		1,500.00
145	Stationery of officers' schools.....				
146	Other authorized articles for officers' schools.....		200.00		200.00
147	Commercial papers.....	500.00	20,000.00		20,000.00
148	Market reports.....	500.00	1,000.00		1,000.00
149	Tableware.....	35,752.00	1,551,000.00		1,551,000.00
150	Mess furniture.....	15,800.00	295,000.00		295,000.00
151	Forage.....	6,171,358.29	78,510,000.00		78,510,000.00
152	Salt.....	5,553.50	76,725.00		76,725.00
153	Vinegar.....	3,285.00	97,815.00		97,815.00
154	Bedding.....	190,000.00	3,105,424.00		3,105,424.00
155	Seeds.....	1,000.00	5,000.00		5,000.00
156	Implements.....	5,000.00	9,725.00		9,725.00
157	Labor.....	500.00	5,000.00		5,000.00
158	Expense incident thereto.....	750.00	4,000.00		4,000.00
159	Straw.....	7,000.00	3,481,500.00		3,481,500.00
160	Stationery.....	100,230.00	8,762,000.00		8,762,000.00
161	Type writers.....	20,000.00	3,057,480.00		3,057,480.00
162	Blank books.....	100.00	9,200.00		9,200.00
163	Blank forms.....	29,600.00	247,500.00		247,500.00
164	Certificates.....	1,000.00	9,900.00		9,900.00
165	Printing.....	78,500.00	150,000.00		150,000.00
	Total.....	12,135,450.89	192,906,769.50	8,763,358.00	201,670,127.50

PHILIPPINE ISLANDS.

111	Care and protection.....	\$16,600.00	\$10,520.00	\$5,900.00	\$16,420.00
112	Stoves.....		100.00		100.00
113	Heating apparatus.....				
114	Ranges.....	5,560.00	10,470.00		10,470.00
115	Cooking stoves.....	500.00	200.00		200.00
116	Coffee roasters.....				
117	Appliances.....	8,340.00	4,000.00		4,000.00
118	Repairs and maintenance.....	6,857.00	6,685.00		6,685.00
119	Candles.....	2,650.00	2,650.00		2,650.00
120	Matches.....	2,160.00	2,130.00		2,130.00

Estimate fiscal year 1919 (appropriation "Regular supplies")—Continued.

PHILIPPINE ISLANDS—Continued.

Item No.	Purpose.	Appropriation fiscal year 1918.	Estimate for fiscal year 1919.		
			Current requirements.	New construction.	Total.
121	Heat.....	\$108,617.00	\$116,818.50	.....	\$116,818.50
122	Light.....	192,875.00	186,400.00	\$33,800.00	220,200.00
123	Fuel for modern batteries.....	55,600.00	30,600.00	.....	30,600.00
124	Engine supplies.....	5,000.00	5,000.00	.....	5,000.00
125	Post bakeries.....	13,500.00	6,000.00	6,000.00	12,000.00
126	Bake ovens.....	4,000.00	6,500.00	.....	6,500.00
127	Ice machines.....	6,300.00	.....	10,000.00	10,000.00
128	Ice machines, maintenance of.....	90,000.00	99,240.00	.....	99,240.00
129	Cold storage.....	75,000.00	114,500.00	.....	114,500.00
130	Ice for organizations.....	2,800.00	3,800.00	.....	3,800.00
131	Ice for issue to office.....	2,200.00	2,200.00	.....	2,200.00
132	Ice for preservation of stores.....	5,000.00	5,000.00	.....	5,000.00
133	Laundries, construction of.....	3,000.00	3,500.00	15,000.00	18,500.00
134	Laundries, operation of.....	3,000.00	3,000.00	.....	3,000.00
135	Laundry materials for general prisoners.....	500.00	500.00	.....	500.00
136	Laundry materials for applicants for enlistment.....	.....	.....	.....	.....
137	Soap.....	10,000.00	10,000.00	.....	10,000.00
138	Hire of employees.....	70,000.00	70,000.00	.....	70,000.00
139	Furniture for post schools.....	500.00	500.00	.....	500.00
140	Textbooks.....	500.00	500.00	.....	500.00
141	Paper.....	100.00	100.00	.....	100.00
142	Equipment.....	1,000.00	1,000.00	.....	1,000.00
143	Instruments.....	.....	500.00	.....	500.00
144	Office furniture for officers' schools.....	.....	500.00	.....	500.00
145	Stationery for officers' schools.....	.....	.....	.....	.....
146	Other authorized articles for officers' schools.....	.....	100.00	.....	100.00
147	Commercial papers.....	.....	.....	.....	.....
148	Market reports.....	.....	.....	.....	.....
149	Tableware.....	4,800.00	9,000.00	.....	9,000.00
150	Mess furniture.....	2,900.00	5,000.00	.....	5,000.00
151	Forage.....	538,641.71	500,000.00	.....	500,000.00
152	Salt.....	1,316.00	1,275.00	.....	1,275.00
153	Vinegar.....	1,100.00	1,100.00	.....	1,100.00
154	Bedding.....	18,100.00	17,000.00	.....	17,000.00
155	Seeds.....	.....	.....	.....	.....
156	Implements.....	200.00	275.00	.....	275.00
157	Labor.....	.....	.....	.....	.....
158	Expenses incident thereto.....	.....	.....	.....	.....
159	Straw.....	500.00	500.00	.....	500.00
160	Stationery.....	20,000.00	20,000.00	.....	20,000.00
161	Typewriters.....	4,530.00	4,520.00	.....	4,520.00
162	Blank books.....	800.00	800.00	.....	800.00
163	Blank forms.....	2,900.00	2,500.00	.....	2,500.00
164	Certificates.....	100.00	100.00	.....	100.00
165	Printing.....	26,500.00	25,000.00	.....	25,000.00
	Total.....	1,314,549.11	1,290,083.50	71,600.00	1,361,683.50

Item R. S. 111.—Care and protection of regular supplies of the Quartermaster Corps.

For the purpose of cost keeping, this item is subdivided. The subitems and amounts estimated for under each item are as follows:

No.	Item.	United States.	Philippine Islands.	Total.
111	Miscellaneous supplies and services.....	\$8,705,890	\$10,110	\$8,716,000
11a	Reservation fences, construction of.....	27,885	5,900	33,785
11b	Reservation fences, repair of.....	28,926	410	29,336
	Total.....	8,762,701	16,420	8,779,121

The detailed explanation of necessity for the above items will be found in the notes.

No.	Item.	Cost fiscal year 1917.	Appropriation fiscal year 1918.	Estimate fiscal year 1919.
111	Miscellaneous supplies and services.....	\$470,155.88	\$80,644.90	\$8,716,000.00
111a	Reservation fences, construction of.....	5,169.53	39,305.50	33,785.00
111b	Reservation fences, repair of.....	1,577.20	5,300.00	29,336.00
	Total.....	476,902.61	125,250.40	8,779,121.00

Item R. S. 111.—Care and protection of regular supplies of the Quartermaster Corps.
[Estimate, fiscal year 1919, \$8,716,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$8,705,890.00	.....	\$8,705,890.00	\$10,110.00	.....	\$10,110.00	\$8,716,000.00
Appropriated fiscal year 1918.....	64,344.90	.....	64,344.90	16,300.00	.....	16,300.00	80,644.90
Expended fiscal year 1917.....	460,045.88	.....	460,045.88	10,110.00	.....	10,110.00	470,155.88

REMARKS.

The supplies purchased under this item consist of such articles and materials as dunnage, paulins, cargo covers, lime, boxes, lumber, nails for temporary shelter; platform, counter, and wagon scales; weights, measures, utensils, paper bags, tools, buckets, and such other supplies as may be required.

The services to be procured under this item consist of the hire of such nonpersonal services as may be required.

The amount estimated for the fiscal year 1919 is based upon the per capita cost for the fiscal year 1917, and will be required, due to the large increase in the Army.

Item R. S. 111a.—Reservation fences, construction of.
[Estimate fiscal year 1919, \$33,785.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$27,885.00	\$27,885.00	.....	\$5,900.00	\$5,900.00	\$33,785.00
Appropriated fiscal year 1918.....	39,305.50	39,305.50	.....	.....	.....	39,305.50
Expended fiscal year 1917.....	5,169.53	5,169.53	.....	.....	.....	5,169.53

REMARKS.

The services to be procured under this item consist of such job and contract services as may be required for the construction of fences for the protection of the reservations upon which the posts are located.

United States.—Estimate is submitted \$27,885 for services required in the construction of reservation fences as follows:

Walter Reed General Hospital, 4,000 feet woven-wire fence, along Georgia Avenue..... \$20,250

Fort Heath, Mass., construction of galvanized iron picket fence..... 7,635

Total..... 27,885

Philippine Islands.—The following projects for new constructions are estimated for the Philippine Islands under this item:

Augur Barracks: For the construction of reservation fences, supplies, \$2,000; services, \$1,000. Local conditions at Jolo make it desirable to fence the reservation of Augur Barracks, and of the subpost of Asterias. The garrison consists of the First and Thirteenth Battalions, Philippine Scouts.

Camp John Hay: For providing a fence on a portion of the reservation that pertains to the water supply and the hydroelectric plant. Supplies, \$900; services, \$500. The garrison at this post consists of Company M, Twenty-seventh Infantry, and Second Battalion, Philippine Scouts.

General: Required to continue the present practice of placing "No trespass" signs on military reservations that would be too expensive to inclose with fences. Supplies, \$1,000; services, \$500.

Item R. S. 111b.—Reservation fences, repair of.

[Estimate fiscal year 1919, \$29,336.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$28,926.00	.....	\$28,926.00	\$410.00	.....	\$410.00	\$29,336.00
Appropriated fiscal year 1918	5,000.00	.....	5,000.00	300.00	.....	300.00	5,300.00
Expended fiscal year 1917...	1,277.20	.....	1,277.20	300.00	.....	300.00	1,577.20

REMARKS.

Services.—The services under this item consist of such job services as may be required for the repair of reservation fences.

United States.—Estimate is submitted for \$28,926 and is for services required for the repair of reservation fences to meet current requirements. This service is called for on the annual inspection reports of March 1 of each year.

Of the above amount for the United States, it is estimated that \$5,000 will be required at permanent posts, which is based upon the apportionment for the fiscal year 1918. The amount estimated for cantonment requirements, various camps, etc., is \$23,926.

Philippine Islands.—Amount called for \$410 (supplies, \$210 and services \$200) is for current repairs at the various posts in the Philippine Department, covering reservation fences.

Item R. S. 112.—Stoves (heating), purchase of—required for heating offices, hospitals, barracks, and quarters, recruiting stations, and United States Disciplinary Barracks.

[Estimate, fiscal year 1919, \$200,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$199,900.00	.....	\$199,900.00	\$100.00	.....	\$100.00	\$200,000.00
Appropriated fiscal year 1918	6,234.89	.....	6,234.89	.....	.....	.....	6,234.89
Expended fiscal year 1917...	31,816.28	.....	31,816.28	.....	.....	.....	31,816.28

REMARKS.

Under this item various kinds of heating and laundry stoves are procured.

There are approximately 9,500 heating and 1,670 laundry stoves in use at the various posts and recruiting stations in the United States. The life of these stoves is about 18 to 20 years.

The amount required for the fiscal year 1919, based upon the per capita cost for the fiscal year 1917, would be approximately \$600,000, but it is believed that the amount estimated for will be sufficient, due to the fact that most of the troops will be in the field and will not require stoves for heating under this item.

Item R. S. 113.—Heating apparatus required for heating offices, hospitals, barracks and quarters, recruiting stations, and United States military prisons.

[Estimate fiscal year 1919, \$857,557.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$857, 557. 00	\$857, 557. 00	.....	.....	.....	\$857, 557. 00
Appropriated fiscal year 1918.....	443, 478. 50	443, 478. 50	.....	.....	.....	443, 478. 50
Expended fiscal year 1917.....	82, 278. 40	82, 278. 40	.....	.....	.....	82, 278. 40

REMARKS.

Supplies.—The supplies to be purchased under this item consist of such articles as brick, cement, stovepipe, heating boilers, etc., required in the installation of heating systems by the purchase of material and hire of necessary labor.

Services.—The services to be procured under this item consist of job and contract services required to install heating appraatus in buildings estimated for under the appropriation "Barracks and quarters" and the appropriation "Construction and repair of hospitals"; also for heating apparatus in buildings already constructed and for central heating plant.

United States.—The following is a statement of the purposes for which the above amount will be required:

For new construction:

For heating new buildings estimated for under "Barracks and quarters" appropriation (see appropriation "Barracks and quarters, 1919").....	\$902
For heating new hospitals and hospital stewards' quarters (see appropriation "Construction and repair of hospitals, 1919").....	99, 098
Total.....	100, 000
To provide for projects (installation of heating in buildings already constructed).....	157, 557
Total.....	257, 557

All of the amount estimated for the United States will be required for new construction.

During the fiscal year 1917, installation of heating plants were authorized as follows:

Jay, N. Y., heating apartment house, four sets officers quarters.....	\$1, 500
Jay, N. Y., double set officers quarters.....	1, 300
Jeffersonville Depot, Ind., heating buildings 46 and 47.....	600
Jefferson Barracks, Mo., replacing boiler in disinfecting plant.....	676
New York depot, heating warehouse No. 2.....	2, 525. 00
Sam Houston, Tex., central heating plant.....	14, 945. 00
Standish, Mass., boiler in bakery.....	856. 38

Calls have been received for the following projects, for which the amount \$157,557 is estimated above:

Adams, Fort, R. I., heating system in building No. 93.....	\$1, 125. 00
Brady, Fort, Mich., new heating boilers for building No. 14, quartermaster storehouse.....	825. 00
Columbus Barracks, Ohio:	
New steam heating boiler in commissioned officers' quarters.....	375. 00
New steam heating boiler in barracks.....	1, 800. 00
D. A. Russell, Wyo., new boiler, etc., for heating plant in building No. 210 (Infantry headquarters).....	1, 800. 00
Governors Island, N. Y., heating system in warehouse, building No. 2, New York depot.....	3, 675. 00
Greble, Fort, R. I., heating system in 6 noncommissioned officers' quarters.....	4, 575. 00
Hamilton, Fort, N. Y., alterations in heating plant in barrack building No. 28.....	1, 050. 00

Leavenworth, Fort, Kans.:	
Mechanical equipment for hot-water heating system for hospital buildings and change of system in Hospital Corps barracks from steam to hot water.....	\$18,750.00
New boilers in school heating plant.....	9,000.00
Madison Barracks, N. Y.:	
Replacing steam heating plant in Dodge Hall, building No. 63.....	3,300.00
Replacing 18 hot-water system in quarters Nos. 1 to 18, inclusive..	17,871.00
McPherson, Fort, Ga., heating system in 8 double barracks.....	24,000.00
Revere, Fort, Mass., heating system in building No. 12.....	1,200.00
Stevens, Fort, Oreg., heating plant, etc., in barracks and quarters.....	31,050.00
Disciplinary Barracks, Leavenworth, Fort, Kans., tunnel and pipe lines to new power plant.....	6,270.00
Flagler, Fort, Wash., changing heating system from stoves to hot-water system.....	1,776.00
Revere, Fort, Mass., material for installing 4 heating apparatuses, 1 in each noncommissioned officers' quarters.....	1,500.00
Slocum, Fort, N. Y., installing new century return tubular boiler (steam) No. 26.....	1,215.00
Washington Barracks, D. C., installation of individual boilers for heating the various buildings.....	24,000.00
Sheridan, Ill.:	
Steam heating in hospital sergeants' quarters (building 52 A and B)...	1,050.00
Replacing heating boiler in guardhouse.....	1,950.00
Total.....	157,557.00

Of the above amount estimated for the United States, \$257,557 is to provide for projects at permanent posts and stations and \$600,000 for cantonment requirements and various camps.

Philippine Islands.—No estimate is submitted for the fiscal year 1919.

Item R. S. 114.—Ranges.

[Estimate, fiscal year 1919, \$260,000.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New construc-tion.	Total.	Current require-ments.	New construc-tion.	Total.	
Estimate.....	\$254,530.00	.....	\$254,530.00	\$5,470.00	.....	\$5,470.00	\$260,000.00
Appropriated fiscal year 1918.....	11,500.00	.....	11,500.00	5,560.00	.....	5,560.00	17,060.00
Expanded fiscal year 1917.....	40,680.88	.....	40,680.88	5,470.00	.....	5,470.00	46,150.88

REMARKS.

Under this item are purchased ranges and cook stoves for cooking and serving food. There are approximately 7,800 ranges and cook stoves on hand at the present time at posts and stations in the United States, and about 1,200 ranges in the Philippine Islands. The average life of ranges has been estimated at between 12 and 15 years, but no time can be definitely fixed at which their usefulness ceases, as it depends upon the service they are put to, the care they receive, and climatic conditions.

The prices at which ranges are issued are as follows:

Army range No. 3.....	\$48.60	Army range No. 4a.....	\$170.00
Army range No. 3a.....	39.40	Army range No. 5.....	88.10

There were purchased during the fiscal year 1917:

Army range No. 3.....	3,520	Army range No. 5.....	3,265
Army range No. 3a.....	0		
Army range No. 4a.....	50	Total.....	6,835

The cost of Army ranges purchased during the past five years was as follows:

	Fiscal year.				
	1913	1914	1915	1916	1917.
Army range No. 3.....	\$28.60	\$31.40	\$31.56	\$31.76	\$48.00
Army range No. 3a.....	27.90	31.88	32.92	.....	.....
Army range No. 4a.....	.....	.....	.....	.....	170.00
Army range No. 5.....	.....	43.79	43.43	.....	88.10

Based upon the per capita cost for the fiscal year 1917 the amount required for the fiscal year 1919 would be approximately \$850,000, but it is believed that the amount estimated for will be sufficient, due to the fact that most of the troops for which estimate is made will be in the field and will use field ranges, under item 114a.

Corrected statement, field ranges, fiscal year 1919, original estimate:

Total officers and men.....	1, 712, 245
90 per cent to use field range No. 1.....	1, 541, 020
10 per cent to use field range No. 2.....	171, 225
	<u>1, 712, 245</u>

No. 1 range.—Cooking capacity, 150 men.

Required for 1,541,020 men.....	10, 274
Life of range, 3 months (4 per year).....	4
	<u>41, 096</u>

Life of equipment, 6 months.

Required:	
20,548 complete with equipment, at \$45.52.....	\$935, 344. 96
20,548 without equipment, at \$27.76.....	570, 412. 48
	<u>1, 505, 757. 44</u>

No. 2 range.—Cooking capacity, 55 men.

Required for 171,225 men.....	3, 108
Life of range, 3 months (4 per year).....	4
	<u>12, 432</u>

Number required for 1 year.....

Life of equipment, 6 months.	
Required:	
6,216 complete with equipment, at \$23.84.....	\$148, 189. 44
6,216 without equipment, at \$18.70.....	116, 239. 20
	<u>264, 428. 64</u>

RECAPITULATION.

41,096 field ranges, No. 1.....	\$1, 505, 757. 44
12,432 field ranges, No. 2.....	264, 428. 64
	<u>1, 770, 186. 08</u>

Item R. S. 114a.—Field ranges, purchase of.

[Estimate, fiscal year 1919, \$500,000.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New construc-tion.	Total. "	Current require-ments.	New construc-tion.	Total.	
Estimate.....	\$495,000.00	.....	\$495,000.00	\$5,000.00	.....	\$5,000.00	\$500,000.00
Appropriated, fiscal year 1918.....	12,859.00	.....	12,859.00	.....	.....	.....	12,859.00
Expended, fiscal year 1917.	101,332.84	.....	101,332.84	10,000.00	.....	10,000.00	111,332.84

REMARKS.

The supplies to be purchased under this item consist of the necessary field ranges required for the equipment of troops in the field in accordance with the allowance fixed in Tables of Organization 1917, as follows:

Unit.	Field range No. 1.	Field range No. 2.
Infantry division:		
Division headquarters.....	1	1
3 Infantry brigade headquarters.....		6
1 Artillery brigade headquarters.....		2
9 regiments Infantry (3 brigades).....	252	45
1 regiment Cavalry.....	28	5
2 regiments Field Artillery, light.....	56	10
1 battalion Engineers, pioneer.....	8	1
1 battalion Signal troops, field.....	8	1
1 pack-train company.....	1	
103 wagon companies.....	11	
4 ambulance companies.....	4	
4 field hospitals.....	4	
Train headquarters—		
1 ambulance company.....		1
1 sanitary train.....		
1 supply train.....		1
Total.....	373	73

There are two sizes of field ranges supplied, the No. 1 having capacity for 150 men and the No. 2 having capacity for 55 men. The life of these ranges is from one to five years. The cost of field ranges, complete, is \$28.36 for the No. 1 and \$15.21 for the No. 2. The cost of field ranges, without equipment, purchased during the past five years, was as follows:

	Fiscal year—				
	1913	1914	1915	1916	1917
Field range:					
No. 1.....		\$9.72	\$9.67	\$10.94	\$12.98
No. 2.....		6.69	6.58	6.55	10.58

Contents of field range No. 1 and field range No. 2 are listed in General Orders No. 39, 1915, page 562, and consist of the following articles:

- Range, field, No. 1:
- 1 field range (1 body No. 41 and 1 boiling plate No. 42).

1 Alamo attachment (2 pieces, 42a and 42b).

6 boilers, Nos. 48, 49, 50, 51, 53, and 54.

1 cleaver, 6-inch.

1 dipper, one-half gallon, No. 55.

1 dipper, quart, No. 56.

2 forks, small.

1 grinder, meat.

1 guard, tent, 6½ inches.

3 knives, butcher, 8-inch.

2 pans, bake, No. 52.

1 pipe, smoke, elbow, No. 47.

4 pipe, smoke, joints, Nos. 43, 44, 45, and 46.

4 rests, pan, No. 57.

1 saw, meat, 15-inch blade.

1 skimmer, large.

2 spoons, large.

1 steel, butcher's, 10-inch.
- Range, field, No. 2:
- 1 field range (1 body No. 61 and 1 boiling plate No. 62).

2 boilers, Nos. 50 and 51.

1 dipper, one-half gallon, No. 55.

2 forks, meat, small.

1 guard, tent.

2 knives, butcher, 8-inch.

2 pans, bake, No. 52.

- Range, field, No. 2—Continued.
- 1 pipe, smoke, elbow, No. 67.
 - 4 pipe, smoke, joints, Nos. 63, 64, 65, and 66.
 - 2 rests, pan, No. 57.
 - 1 saw, meat, 15-inch blade.
 - 1 skimmer, small.
 - 2 spoons, small.
 - 1 steel, butcher's, 10-inch.

The Alamo attachment consists of two parts, 42a and 42b (see circular 8, Office Quartermaster General, 1914), and is used only with field range No. 1. The Alamo attachment increases the capacity of the field range and lengthens its life.

It is estimated that approximately 16,000 field ranges No. 1 and 3,000 field ranges No. 2 will be purchased under this item during the fiscal year 1919.

Field bakeries, field ranges, and rolling kitchens.

JEFFERSONVILLE DEPOT.

Number of field bakeries complete, contracted for and purchased since Apr. 1, 1916.....	220
Number due under contracts.....	124
Total money involved for the purchase and those contracted for.....	\$1, 925, 184. 20
Latest average price of field bakery complete.....	\$13, 026. 60
Price per field bakery unit.....	\$714. 49
Number of field ranges No. 1 purchased and contracted for since Apr. 1, 1916.....	95, 600
Number of field ranges No. 1 due under contract.....	63, 018
Average price of field ranges No. 1, complete.....	\$34. 70
Total money involved in field ranges No. 1.....	\$3, 346, 000
Unit price of field ranges No. 1 without equipment.....	\$26. 36½
Number of field ranges No. 2 purchased and contracted for since Apr. 1, 1916.....	14, 180
Number of field ranges No. 2 due under contract.....	10, 936
Average price of field ranges No. 2, complete.....	\$26. 50
Total money involved in field ranges No. 2.....	\$375, 770
Unit price of field ranges No. 2 without equipment.....	\$17. 12
Number of field bakeries shipped to France:	
Company.....	1
Section.....	1
Unit.....	10
Number of field ranges No. 1, complete, shipped to France.....	1, 127
Number of field ranges No. 2, complete, shipped to France.....	488
Number of field bakeries, complete, on hand for issue Oct. 31, 1917...	None.
Number of field ranges, No. 1, complete, on hand for issue Oct. 31, 1917.	852
Number of field ranges, No. 2, complete, on hand for issue Oct. 31, 1917.	None.

JEFFERSONVILLE AND NEW YORK DEPOTS.

Number of rolling kitchens purchased.....	582
Number of rolling kitchens sent to France.....	578
Total money involved in rolling kitchens.....	\$2, 345, 630. 01
Number of rolling kitchens to be delivered beginning about Nov. 15..	1, 857
Average price of a rolling kitchen.....	\$961. 71
Food-serving capacity:	
Steinburn, 3 articles, for 246 men.	
Magor, 3 articles, for 192 men.	
Eclipse, 3 articles, for 192 men.	

Item R. S. 115.—Stoves, cooking.

[Estimate fiscal year 1919, \$10,000.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New construc-tion.	Total.	Current require-ments.	New construc-tion.	Total.	
Estimate.....	\$9, 800. 00	.....	\$9, 800. 00	\$200. 00	.....	\$200. 00	\$10, 000. 00
Appropriated fiscal year 1918..	250. 00	.....	250. 00	500. 00	.....	500. 00	750. 00
Expended fiscal year 1917.....	6, 188. 24	.....	6, 188. 24	200. 00	.....	200. 00	6, 388. 24

REMARKS.

Under this item are provided cooking stoves for detachments, outposts, subposts, etc.

These stoves cost about \$15 each. They are not carried in stock, but are purchased as required. They are used at remount depots, where small detachments are stationed.

Based upon the per capita cost for the fiscal year 1917, the amount required for the fiscal year 1919 would be approximately \$120,000, but it is believed that the amount estimated for will be sufficient.

Item R. S. 116.—Coffee roasters.

[Estimate, fiscal year 1919, \$10,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$10,000.00	.....	\$10,000.00	.....	.....	.....	\$10,000.00
Expended fiscal year 1917.....	5,538.28	.....	5,538.28	.....	.....	.....	5,538.28

REMARKS.

Based upon the per capita cost for the fiscal year 1917, the amount required for the fiscal year 1919 would be approximately \$100,000, but it is believed that the amount estimated for will be sufficient, due to the fact that coffee is usually purchased already ground and roasted.

Item R. S. 117.—Appliances.

[Estimate, fiscal year 1919, \$1,712,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$1,708,000.00	.....	\$1,708,000.00	\$4,000.00	.....	\$4,000.00	\$1,712,000.00
Appropriated fiscal year 1918.....	60,000.00	.....	60,000.00	8,340.00	.....	8,340.00	68,340.00
Expended fiscal year 1917.....	87,384.78	.....	87,384.78	4,000.00	.....	4,000.00	91,384.78

REMARKS.

The supplies to be purchased under this item comprise boilers of various kinds, for cooking food, making coffee, etc., cookers, pot covers, bread cutters, kettles, steam roasting ovens, water, tea, and coffee urns, plate warmers, wrought-iron pan racks, meat choppers, trucks and bread racks for kitchens, butter cutters, dishwashers, potato peelers, baking pans, kitchen car outfits, portable gas cookers; cooking outfits for company messes, Philippine Scouts, and mountain artillery; rolling kitchens, and a miscellaneous lot of utensils known as "range furniture," and such other supplies as may be required.

Cooking outfits for company messes, better known as "march kits," are provided for under General Orders No. 35, War Department, 1914, to be transported with troops in the field. General Orders No. 35, War Department, 1914, has been amended by instructions of the Secretary of War of June 10, 1915, and General Order No. 13, 1916, to provide as follows:

For each company mess, one cake turner; 1 cleaver, meat; 2 cans, water, G. I., nested; 1 fork, meat, large; 1 knife, butcher; 1 dipper, large; 1 fire irons (or grates), set; 1 kett'e, camp, with cover, for every 25 men; 2 pans, bake, large, for every 50 men; 1 wall-tent fly.

The life of these outfits is estimated to be about two or three years.

The amount estimated for the fiscal year 1919 is based upon the per capita cost for the fiscal year 1917.

Item R. S. 118.—Repairs and maintenance (consolidated).

Items.	Cost, fiscal year 1917.	Appropriations, fiscal year 1918.	Estimate, fiscal year 1919.
Item 118a, repairs and maintenance of heating apparatus.....	\$54 335. 20	\$79,559. 00	\$467,355. 00
Item 118b, repairs and maintenance of heating stoves.....	11,921. 56	14,118. 00	100,000. 00
Item 118c, repairs and maintenance of ranges and cooking stoves...	30,087. 72	36,301. 00	150,000. 00
Item 118e, repairs and maintenance of cooking appliances.....	1,707. 28	4,880. 00	31,500. 00
Item 118f, repairs and maintenance of field ranges, including equipment to complete.....	24,715. 52	12,000. 00	458,000. 00
Total.....	122,767. 28	146,858. 00	1,208,855. 00

Item R. S. 118a.—Repair and maintenance, heating apparatus.

[Estimate, fiscal year 1919, \$467,355.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$466,830. 00	.....	\$466,830. 00	\$525. 00	.....	\$525. 00	\$467,355. 00
Appropriated, fiscal year 1918..	79,034. 00	.....	79,034. 00	525. 00	.....	525. 00	79,559. 00
Expended, fiscal year 1917...	53,810. 20	.....	53,810. 20	525. 00	.....	525. 00	54,335. 20

REMARKS.

Supplies.—The supplies to be procured under this item consist of such articles as asbestos, asphaltum, grates, spacing bars, cement, fire clay, cold chisels, drills, boiler compound, files, piping, gaskets, solder, steel valves, washers, and such other supplies as may be required to meet current requirements.

Services.—The services to be procured consist of job and contract services required for the maintenance and repair of heating apparatus.

United States.—Of the total amount estimated for the United States, \$466,830, the sum of \$366,830 is estimated as being required to meet current requirements for the purchase of supplies and \$100,000 for the procurement of services.

The increase of the estimate over the cost for fiscal year 1917 is due to the increase of the Army, and is for annual allotment for repairs to heating plants and on account of additional heating plants installed from time to time.

Of the above amount estimated for the United States, \$90,000 will be required at permanent posts and stations, which is based upon the apportionment for the fiscal year 1918 plus a small increase to allow for advance in the cost of material and labor. The amount estimated for cantonment requirements, various camps, etc., is \$376,830.

Philippine Islands.—The amount, \$525, is that called for by Philippine authorities for repair and maintenance of heating apparatus in the Philippines.

NOTE.—From information submitted on heating data sheets it is found that about 2,371 steam plants, 593 hot-water plants, and 340 hot-air plants have been installed up to date for heating purposes and for which repairs are necessary, and, in addition thereto, there are 12 central heating plants supplying heat to about 160 buildings, making the total number of plants, counting the buildings heated from central plants, 3,464.

Item R. S. 118b.—Repair and maintenance of heating stoves.

[Estimate, fiscal year 1919, \$100,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$99,220. 00	.....	\$99,220. 00	\$780. 00	.....	\$780. 00	\$100,000. 00
Appropriated fiscal year 1918..	13,338. 00	.....	13,338. 00	780. 00	.....	780. 00	14,118. 00
Expended fiscal year 1917....	11,141. 56	.....	11,141. 56	780. 00	.....	780. 00	11,921. 56

REMARKS.

The supplies to be purchased under this item consist of stove castings, and such articles enumerated under Item R. S. 118a, ante, as may be required for the repair of heating stoves.

The services to be procured consist of such job and contract services as may be necessary to properly repair heating stoves.

Based upon the per capita cost for the fiscal year 1917, the amount required for the fiscal year 1919 would be approximately \$220,000, but it is believed that the amount estimated for will be sufficient due to the fact that most of the troops will be in the field and will not require heating stoves.

Item R. S. 118c.—Repair and Maintenance of ranges and cooking stoves.

[Estimate, fiscal year 1919, \$150,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$145,500.00	.....	\$145,500.00	\$4,500.00	.....	\$4,500.00	\$150,000.00
Appropriated fiscal year 1918.....	31,627.00	.....	31,627.00	4,674.00	.....	4,674.00	36,301.00
Expended fiscal year 1917..	25,587.72	.....	25,587.72	4,500.00	.....	4,500.00	30,087.72

REMARKS.

The supplies to be purchased under this item consist of range castings, and such other articles enumerated under Item 118a, ante, as may be required for repair of ranges and cooking stoves.

The services to be procured consist of such job and contract services as may be necessary to properly repair ranges and cooking stoves.

The amount required for the fiscal year 1919, based upon the per capita cost for the fiscal year 1917 would be approximately \$550,000, but it is believed that the amount estimated for will be sufficient, due to the fact that field ranges will be used by troops in the field.

Item R. S. 118d.—Repair and maintenance of coffee roasters. (No estimate for 1919.)

Item R. S. 118e.—Repair and maintenance of cooking appliances.

[Estimate, fiscal year 1919, \$31,500.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$30,620.00	.....	\$30,620.00	\$880.00	.....	\$880.00	\$31,500.00
Appropriated, fiscal year 1918	4,000.00	.....	4,000.00	880.00	.....	880.00	4,880.00
Expended, fiscal year 1917...	807.28	.....	807.28	900.00	.....	900.00	1,707.28

REMARKS.

The supplies to be purchased under this item consist of such articles as tin, iron, aluminum, wire, bolts, steel, tinner's tools, and such other supplies as may be required to meet the current requirements for repair and maintenance of cooking appliances.

The services to be procured consist of such job services as may be necessary for repair and maintenance of cooking appliances.

The amount estimated for the fiscal year 1919 is based on the per capita cost for the fiscal year 1917.

Item R. S. 118f.—Repair and maintenance of field ranges, including equipment to complete field ranges.

[Estimate, fiscal year 1919, \$458,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$458,000.00	.....	\$458,000.00	.....	.....	.....	\$458,000.00
Appropriated, fiscal year 1918.....	12,000.00	.....	12,000.00	.....	.....	.....	12,000.00
Expended, fiscal year 1917.....	24,715.52	.....	24,715.52	.....	.....	.....	24,715.52

REMARKS.

The supplies to be purchased under this item consist of such articles as tin, wire, bolts, tinner's tools, utensils, bake pans, and such other supplies as may be necessary for repair and maintenance of field ranges.

The services to be procured consist of such job services as may be necessary for repair and maintenance of field ranges.

The amount estimated for the fiscal year 1919 is based on the per capita cost for the fiscal year 1917.

Item R. S. 119.—Candles, authorized issue of.

[Estimate, fiscal year 1919, \$786,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$783,350.00	.....	\$783,350.00	\$2,650.00	.....	\$2,650.00	\$786,000.00
Appropriated, fiscal year 1918.....	12,000.00	.....	12,000.00	2,650.00	.....	2,650.00	14,650.00
Expended, fiscal year 1917.....	39,790.20	.....	39,790.20	2,650.00	.....	2,650.00	42,440.20

REMARKS.

Candles are issued (when illuminants are not furnished) as follows:

To organizations of enlisted men: For each ration, except the Philippine ration, 0.24 ounces; in Alaska, 0.32; for each Philippine ration, 0.12 ounces; to headquarters in the field, or organizations larger than a company, to hospitals, bakeries, depots of supply, guards, and telegraph stations, in such quantities as the commanding officer may order as necessary. There are six candles to a pound and the cost is about 15 cents a pound.

Lantern candles are issued for use in lanterns furnished to the Army by the Government and used in the public service in such quantities as the commanding officer may order as necessary. There are 12 candles to a pound and they cost about 18 cents per pound. (See par. 1215, Army Regulations, 1913.)

The amount estimated for the fiscal year 1919 is based on the per capita cost for the fiscal year 1917.

Item R. S. 120.—Matches, authorized issue of.

[Estimate, fiscal year 1919, \$628,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$625,870.00	.....	\$625,870.00	\$2,130.00	.....	\$2,130.00	\$628,000.00
Appropriated, fiscal year 1918.....	5,976.00	.....	5,976.00	2,160.40	.....	2,160.40	8,136.40
Expended, fiscal year 1917.....	31,751.56	.....	31,751.56	2,128.00	.....	2,128.00	33,879.56

REMARKS.

Matches are issued for lighting fires and lights, for which fuel and the illuminating supplies are issued in such quantities as the commanding officer may order as necessary. (See par. 1215, Army Regulations, 1913.)

A package of 12 boxes of matches weighs 6 ounces and costs approximately one-half cent per box.

The amount estimated for the fiscal year 1919 is based on the per capita cost for the fiscal year 1917.

Item R. S. 121.—Heat (fuel in kind).

[Estimate, fiscal year 1919, \$54,790,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$54,682,000.00	.....	\$54,682,000.00	\$108,000.00	.....	\$108,000.00	\$54,790,000.00
Appropriated fiscal year 1918....	2,659,530.81	.....	2,659,530.81	107,800.00	.....	107,800.00	2,767,330.81
Expended, fiscal year 1917.....	2,307,829.22	.....	2,307,829.22	107,989.78	.....	107,989.78	2,415,819.00

REMARKS.

The supplies to be purchased under this item consist of coal, wood, coke, fuel oil, mineral oil for heating purpose, charcoal, etc.

The services to be procured consist of the temporary hire of inspectors of fuel and laborers required in the preparation and handling of fuel.

The amount of the estimate for the fiscal year 1919 is based on the per capita cost for the fiscal year 1917.

The following table shows the prices paid for coal for the fiscal years 1916, 1917, and 1918 at the Army posts named below:

Prices paid for coal per ton for the fiscal years 1916, 1917, and 1918.

Posts.	1916		1917		1918	
	Anthracite.	Bituminous.	Anthracite.	Bituminous.	Anthracite.	Bituminous.
Ethan Allen, Vt.:						
Nut.....	\$6.37	.....	\$6.60	.....	\$8.90	.....
Stove.....	6.15	.....	6.38	.....	8.85	.....
Egg.....	.....	.....	6.33	.....	8.60	.....
Myer, Va.:						
Egg.....	5.64	\$4.46	5.82	\$4.91	6.77	.....
Stove.....	6.05	.....	6.22	.....	7.02	.....
Nut.....	6.13	.....	6.32	.....	7.12	.....
Oglethorpe, Ga.:						
Stove.....	8.47	2.95	8.63	2.85	.....	\$2.95-\$4.85
Nut.....	.....	.....	8.85	.....	.....	.....
Sill, Okla.:	.....	\$4.10- 5.30	.....	13.90- 5.63	.....	7.55- 7.95
Leavenworth, Kans.:						
Stove.....	\$5.92- 6.43	.....	6.60	1.34	.....	1.34- 4.00
Egg.....	6.17- 6.68	.....	6.85	.....	\$6.87- 6.98	.....
Nut.....	6.42- 6.94	.....	7.10	.....	7.23	.....
Riley, Kans.:	6.19- 6.69	2.15	6.85	2.25- 2.50	6.98	1.36- 5.64
Sheridan, Ill.:	6.19- 6.94	1.24	7.075	1.34	6.90- 9.60	1.34- 5.00

Additional fuel will be required to heat buildings constructed during the fiscal year 1918. There is practically no permanent construction being done during the fiscal year 1918, but a large amount of temporary construction is being done at cantonments, camps, and posts for which heat will have to be supplied.

For issue of fuel at military posts, allowances are defined in General Orders No. 57, War Department, July 25, 1914, and General Orders, No. 63, November 15, 1915.

The allowances of fuel for officers and enlisted men are provided for by paragraphs 1036 and 1044, Army Regulations, 1913, corrected to April 15, 1917, which reads:

"Each officer or enlisted man entitled to and occupying public quarters will be furnished at the expense of the United States with the quantity of fuel required to

do the necessary heating, cooking, and heat the necessary water in the building to which assigned at a military post, in accordance with allowances published from time to time. The allowances are cumulative for the entire fiscal year, or such portion thereof as an officer or organization may serve at the same post or station. At the end of the fiscal year, or when officers or organizations change station, fuel accounts shall be closed and excess issues paid for. Savings on allowances are not transferable to another post or station."

Contracts for purchase of fuel for the fiscal year 1917 (exclusive of the Philippine Islands) for the appropriation, "Supplies, services, and transportation, Quartermaster Corps," under items 117, 121, 122, 123, 124, 128, and 134 were as follows:

213,202,725 pounds bituminous coal.....	\$590,761.65
229,359,698 pounds anthracite coal.....	805,843.06
213,131 cords wood.....	1,182,951.22
1,117,028 gallons mineral oil.....	118,232.18
493,509 gallons gasoline.....	103,367.70
1,225,030 gallons fuel oil.....	57,656.56
853,403 pounds coke.....	3,468.95
19,614,658 cubic feet fuel gas.....	3,733.68
Total.....	2,866,015.00

The average prices paid for coal procured under the above contracts, were \$0.3156 per hundredweight, and for wood \$5.55 per cord, an increase of \$0.0616 per hundredweight for coal and a decrease of \$0.21 per cord for wood, as compared with prices for the fiscal year 1916.

Based on the increase in prices for the fiscal year 1918 over prices for the fiscal year 1917, it is estimated that approximately \$10,000,000 will be required to cover the probable increase in prices for the fiscal year 1919, which amount has been included in this estimate.

For the current fiscal year coal required at posts and stations for which contracts have not been made is being procured through the United States Fuel Administration at prices fixed by the President, as indicated below, the prices being on f. o. b. mine basis for ton of 2,000 pounds for bituminous and 2,240 for anthracite, viz:

ANTHRACITE.

White ash grade:		
Broken.....		\$4.55
Egg.....		4.45
Stove.....		4.70
Chestnut.....		4.80
Pea.....		3.40
Red ash grade:		
Broken.....		4.75
Egg.....		4.65
Stove.....		4.90
Chestnut.....		4.90
Pea.....		3.50
Lykens Valley grade:		
Broken.....		5.00
Egg.....		4.90
Stove.....		5.30
Chestnut.....		5.30
Pea.....		3.75

BITUMINOUS.

	Run of mine.	Prepared sizes.	Slack or screenings.		Run of mine.	Prepared sizes.	Slack or screenings.
Pennsylvania.....	\$2.00	\$2.25	\$1.75	Tennessee (Jellico).....	\$2.40	\$2.65	\$2.15
Maryland.....	2.00	2.25	1.75	Indiana.....	1.95	2.20	1.70
West Virginia.....	2.00	2.25	1.75	Illinois.....	1.95	2.20	1.70
West Virginia (New River).....	2.15	2.40	1.90	Illinois (third vein).....	2.40	2.65	2.15
Virginia.....	2.00	2.25	1.75	Arkansas.....	2.65	2.90	2.40
Ohio (thick vein).....	2.00	2.25	1.75	Iowa.....	2.70	2.95	2.45
Ohio (thin vein).....	2.35	2.60	2.10	Kansas.....	2.55	2.80	2.30
Kentucky.....	1.95	2.20	1.70	Missouri.....	2.70	2.95	2.45
Kentucky (Jellico).....	2.40	2.65	2.15	Oklahoma.....	3.05	3.30	2.80
Alabama (big seam).....	1.90	2.15	1.65	Texas.....	2.65	2.90	2.40
Alabama (Pratt, Jaeger, and Corona).....	2.15	2.40	1.90	Colorado.....	2.45	2.70	2.20
Alabama (Cahaba and Black Creek).....	2.40	2.65	2.15	Montana.....	2.70	2.95	2.45
Tennessee (eastern).....	2.30	2.55	2.05	New Mexico.....	2.40	2.65	2.15
				Wyoming.....	2.50	2.75	2.25
				Utah.....	2.60	2.85	2.35
				Washington.....	3.25	3.50	3.00

Item R. S. 121a.—Appliances for handling and preparation of fuel.

[Estimate, fiscal year 1919, \$477,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$476,181.50	.....	\$476,181.50	\$818.50	.....	\$818.50	\$477,000.00
Appropriated, fiscal year 1918.....	19,500.00	.....	19,500.00	817.00	.....	817.00	20,317.00
Expended, fiscal year 1917.....	24,922.62	.....	24,922.62	812.50	.....	812.50	25,735.12

REMARKS.

The supplies to be purchased under this item consist of such articles as coal forks, shovels, screens, axes, saws, scoops, belting, valves, wood-sawing machines, gauges, lubricating oil, etc.

The services to be procured consist of the hire of labor for cutting wood, storing in bins, etc.

The amount estimated for the fiscal year 1919 is based on the per capita cost for the fiscal year 1917.

Item R. S. 121b.—Heat, purchase of.

[Estimate, fiscal year 1919, \$517,067.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$509.067	.....	\$509.067	\$8,000	.....	\$8,000	\$517.067
Appropriated, fiscal year 1918..	87,974	.....	87,974	.....	.....	.....	87,974
Expended, fiscal year 1917.....	43,665	.....	43,665	8,000	.....	8,000	51,665

REMARKS.

Services.—The services under this item consists of payments for purchase of heat required in rented buildings.

United States.—The amount estimated for under this item is required to meet current requirements for class 1 services. The amount estimated for above is required on account of the increase in the strength of the Army and is believed necessary. The purchase of heat is required for rented buildings, principally at recruiting stations, and for reimbursing the Ordnance Department for heat furnished at the various arsenals.

Of the above amount estimated for the United States, \$87,974 will be required at permanent posts and stations, which is based upon the estimate for fiscal year 1918. The amount estimated for cantonment requirements, various camps, etc., is \$421,093.

Philippine Islands.—The amount called for, \$8,000, is the same as that estimated for by department authorities.

Item R. S. 122.—Light.

No.	Items.	Cost, fiscal year 1917.	Appropriation, fiscal year 1918.	Estimate, fiscal year 1919.
122	Light (electric current), purchase of.....	\$295,830.28	\$536,370.00	\$7,055,000.00
122a	Mineral oil, purchase of.....	90,300.72	117,487.00	940,000.00
122b	Other light, purchase of.....	23,917.08	4,000.00	27,729.00
122c	Illuminating supplies for oil lamps.....	11,152.92	18,000.00	120,000.00
122d	Illuminating supplies for electric and gas lighting.....	26,592.48	34,621.00	192,936.00
122e	Incandescent lamps.....	26,616.04	44,181.00	162,000.00
122f	Installation and extension of lighting systems (new construction).....	42,940.96	544,979.50	384,355.00
122g	Repairs to lighting plants and systems.....	45,485.04	116,080.00	643,011.00
122h	Fuel for operation of lighting plants.....	67,791.52	115,636.00	500,000.00
	Total.....	630,627.04	1,531,354.50	10,025,031.00

For the purpose of cost keeping this item is subdivided as follows:

No.	Items.	United States.	Philippine Islands.	Total.
122	Light (electric current) services.....	\$7,000,000	\$55,000	\$7,055,000
122a	Mineral oil (supplies).....	840,000	100,000	940,000
122b	Other light (supplies and services).....	27,729	.....	27,729
122c	Illuminating supplies for oil lamps (supplies).....	115,000	5,000	120,000
122d	Illuminating supplies for electric and gas lighting (supplies).....	189,536	3,400	192,936
122e	Incandescent lamps (supplies).....	160,000	2,000	162,000
122f	Installation and extension of lighting systems (services).....	350,555	33,800	384,355
122g	Repairs to lighting plants and systems (supplies and services).....	632,011	11,000	643,011
122h	Fuel for operation of lighting plants (supplies)	490,000	10,000	500,000
	Total.....	9,804,831	220,200	10,025,031

Item R. S. 122.—Light (electric current), purchase of.

[Estimate fiscal year 1919, \$7,055,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$7,000,000.00	.....	\$7,000,000.00	\$55,000.00	.....	\$55,000.00	\$7,055,000.00
Appropriated, fiscal year 1918....	481,370.00	.....	481,370.00	55,000.00	.....	55,000.00	536,370.00
Expended, fiscal year 1917.....	241,026.28	.....	241,026.28	54,804.00	.....	54,804.00	295,830.28

REMARKS.

United States.—The amount estimated for under this item is required to meet current requirements. The increase in amount of the estimate for the fiscal year 1919 is due to the increase in the strength of the Army, principally to light the various cantonments, and temporary buildings at camps and regular posts. It must also be borne in mind if the garrisons on the Canal Zone are to be increased to war strength, considerable extra current will be required there on account of peculiar conditions prevailing in the Canal Zone, where it was found necessary to increase the allowances for current 100 per cent to provide for the heating of dry rooms by means of electric lamps in such rooms for officers' and enlisted men's quarters and 50 per cent for barracks and storehouses at all posts in the Canal Zone to provide for necessary heat to preserve and care for the clothing and harness or leather. It has also been found necessary to increase light allowances for stables 100 per cent in order to keep harness room dry and furnish all-night light to protect animals from vampire bats, etc. This increase to be based on the allowances as prescribed in G. O. 33, W. D., 1915.

Garrisoned posts lighted by electricity.—There are 110 garrisoned posts lighted by electricity. Current is purchased at 83 posts and generated in Government plants at 27 posts:

Statement showing the cost per kilowatt for current generated in Government plants at Army posts.

Alcatraz Island, Cal.....	\$0.048
Bayard, N. Mex.....	.067
Casey, Wash.....	.05
Caswell, N. C.....	.08
Columbia, Wash.....	.14
Dade, Fla.....	.069
Greble, R. I.....	.066
Hancock, N. J.....	.035
H. G. Wright, N. Y.....	.10
Army and Navy General Hospital, Hot Springs, Ark.....	.05
Howard, Md.....	.036

Huachuca, Ariz.....	\$0.02
Leavenworth United States Disciplinary Barracks, Kans.....	.015
McKinley, Me.....	.049
Michie, N. Y.....	.10
Monroe, Va.....	.03
Morgan, Ala.....	.095
Mott, N. J.....	.15
Pickens, Fla.....	.20
Letterman General Hospital, California.....	.021
Schreven, Ga.....	.031
Sill, Okla.....	.02
Stevens, Oreg.....	.03
Strong, Mass.....	.034
Terry, N. Y.....	.043
Warren, Mass.....	.044
Yellowstone, Wyo.....	.01

Posts at which electric current is purchased and cost thereof.

Post.	Cost per kilo-watt-hour.		Post.	Cost per kilo-watt-hour.	
	Interior.	Exterior.		Interior.	Exterior.
Armstrong, Hawaii.....	\$0.025	\$0.025	Miley, Cal.....	\$0.03	\$0.03
Adams, R. I.....	.04	.04	Moultrie, S. C.....	.10	.06
Andrews, Mass.....	.0625	.0625	Myer, Va.....	.045	.045
Baker, Cal.....	.03	.03	McKinley, P. I.....	.10	.10
Banks, Mass.....	.10	.08	Oglethorpe, Ga.....	.012	.012
Barrancas, Fla.....	.055	.055	Omaha, Nebr.....	.06	.06
Barry, Cal.....	.03	.03	Ontario, N. Y.....	.05	.065
Benjamin Harrison, Ind.....	.03	.03	Plattsburgh Barracks, N. Y.....	.05	.05
Bliss, Tex.....	.02	.02	Porter, N. Y.....	.08	.....
Brady, Mich.....	.02	.....	Preble, Me.....	.04	.04
Columbus Barracks, Ohio.....	.022	.022	Presidio of Monterey, Cal.....	.04	.04
Constitution, N. H.....	.08	.075	Presidio of San Francisco, Cal.....	.014	.014
Crockett, Tex.....	.06	.06	Reno, Okla.....	.035	.035
Crook, Nebr.....	.07	.07	Revere, Mass.....	.0625	.0625
D. A. Russell, Wyo.....	.03	.03	Riley, Kans.....	.05	.05
De Russy, Hawaii.....	.025	.025	Robinson, Nebr.....	.08	.08
Des Moines, Iowa.....	.065	.06	Rodman, Mass.....	.08	.08
Douglas, Utah.....	.04	.04	Rosecrans, Cal.....	.05	.05
Dupont, Del.....	.065	.065	Ruger, Hawaii.....	.025	.025
Ethan Allen, Vt.....	.05	.05	Sam Houston, Tex.....	.04	.04
Flagler, Wash.....	.025	.025	San Juan, P. R.....	.10	.10
Geo. Wright, Wash.....	.035	.035	Schofield Barracks, P. I.....	.04	.04
Hamilton, N. Y.....	.05	.05	Shafter, Hawaii.....	.025	.025
Heath, Mass.....	.10	.....	Sheridan, Ill.....	.0275	.0275
Hunt, Va.....	.06	.06	Slocum, N. Y.....	.05	.05
Jackson Barracks, La.....	.04	.04	Snelling, Minn.....	.02	.02
Jay, N. Y.....	.05	.05	Stark, N. H.....	.08	.08
Jefferson Barracks, Mo.....	.025	.025	Totten, N. Y.....	.07	.07
Kamohameha, Hawaii.....	.025	.025	Thomas, Ky.....	.06	.06
Keogh, Mont.....	.07	.035	Vancouver Barracks, Wash.....	.01	.01
Key West Barracks, Fla.....	.08	.08	Wadsworth, N. Y.....	.065	.065
Lawton, Wash.....	.025	.025	Ward, Wash.....	.05	.05
Leavenworth, Kans.....	.0375	.0375	Washington, Md.....	.055	.055
Liscum, Alaska.....	.045	.045	Washington Barracks, D. C.....	.06	.06
Logan, Colo.....	.06	.06	Walter Reed General Hospital, D. C.....	.06	.06
McDowell, Cal.....	.03	.03	Winfield Scott, Cal.....	.017	.017
McIntosh, Tex.....	.10	.....	Wood, N. Y.....	.04	.04
McPherson, Ga.....	.07	.06	Worden, Wash.....	.025	.025
Madison Barracks, N. Y.....	.06	.05	Wayne, Mich.....	.05	.....
Mansfield, R. I.....	.10	.10	Whipple Barracks, Ariz.....	.....	.05
Mason, Cal.....	.011	.011	Williams, Me.....	.04	.04
Meads, S. Dak.....	.06	.06			

Of the above amount estimated for the United States, \$500,000 will be required at permanent posts and stations, which is based upon the estimate for fiscal year 1918 plus a small increase to allow for advance in the cost of material and labor. The amount estimated for cantonment requirements, various camps, etc., is \$6,500,000.

Philippine Islands.—Estimate is made for \$55,000, the amount called for by department authorities.

ARMY APPROPRIATION BILL, 1919.

Item R. S. 122a.—Mineral oil, purchase of.

[Estimate, fiscal year 1919, \$940,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$840,000.00	.....	\$840,000.00	\$100,000.00	.....	\$100,000.00	\$940,000.00
Appropriated, fiscal year 1918.....	69,487.00	.....	69,487.00	48,000.00	.....	48,000.00	117,487.00
Expended, fiscal year 1917.....	27,300.72	.....	27,300.72	63,000.00	.....	63,000.00	90,300.72

REMARKS.

The supplies procured under this item consist of mineral oil, which is usually purchased under contract.

Mineral oil is used for lighting purposes at posts and stations not equipped for lighting by electricity, and also for use in lanterns.

Based on the per capita cost for the fiscal year 1917 the amount required for the fiscal year 1919 would be approximately \$1,600,000, but it is believed that the amount estimated for will be sufficient, due to the fact that barracks for troops at cantonment camps will be lighted by electricity.

Item R. S. 122b.—Other light, purchase of.

[Estimate, fiscal year 1919, \$27,729.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$27,729.00	.....	\$27,729.00	.....	.....	.....	\$27,729.00
Appropriated fiscal year 1918.....	4,000.00	.....	4,000.00	.....	.....	.....	4,000.00
Expended fiscal year 1917.....	23,917.08	.....	23,917.08	.....	.....	.....	23,917.08

REMARKS.

Services.—The services covered by this item consist of the purchase of gas for lighting purposes.

United States.—The total of the estimate \$27,729 is required for services. The amount estimated for is \$3,811.92 more than the cost for the fiscal year 1917 and is due to the increased strength of the Army. This service is used at present as follows: At Fort Wayne, Mich, gas is purchased at 45 cents to 75 cents per 1,000 cubic feet; at Fort Porter, N. Y., \$1 per 1,000 cubic feet; at Pittsburg Storage and Supply Depot, 16 to 27½ cents per thousand cubic feet.

Of the above amount estimated for the United States, \$5,000 will be required at permanent posts, which is based upon the estimate for fiscal year 1918 plus a small increase to allow for the advance in cost of material and labor. The amount estimated for cantonment requirements, various camps, etc., is \$22,729.

Philippine Islands.—No estimate is submitted.

Item R. S. 122c.—Illuminating supplies for oil lamps.

[Estimate, fiscal year 1919, \$120,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$115,000.00	.....	\$115,000.00	\$5,000.00	.....	\$5,000.00	\$120,000.00
Appropriated fiscal year 1918.....	12,500.00	.....	12,500.00	5,500.00	.....	5,500.00	18,000.00
Expended fiscal year 1917.....	5,952.92	.....	5,952.92	5,200.00	.....	5,200.00	11,152.92

REMARKS.

The supplies to be purchased under this item consist of lamps (other than electric and gas), lanterns, lamp posts, chimneys, wicks, etc.

Based on the per capita cost for the fiscal year 1917, the amount required for the fiscal year 1919 would be approximately \$206,000, but it is believed that the amount estimated for will be sufficient, due to the fact that barracks for troops at cantonment camps will be lighted by electricity.

Item R. S. 122d.—Illuminating supplies for electric and gas lighting.

[Estimate, fiscal year 1919, \$192,936.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$189,536.00	.....	\$189,536.00	\$3,400.00	.....	\$3,400.00	\$192,936.00
Appropriated, fiscal year 1918.....	31,221.00	.....	31,221.00	3,400.00	.....	3,400.00	34,621.00
Expended, fiscal year 1917.....	23,192.48	.....	23,192.48	3,400.00	.....	3,400.00	26,592.48

REMARKS.

Supplies.—The supplies purchased under this item consist of chandeliers, brackets, gas burners, lamp posts, watt meters, and various other lighting fixtures.

United States.—Estimate is made for \$189,536 for supplies to meet current requirements. This estimate is \$166,343.52 more than the cost for the fiscal year 1917, but the increase is necessary to provide for buildings not already equipped with fixtures and those which may be necessary to remodel to provide for the increase in the Army.

Of the above amount it is estimated for the United States that \$40,000 will be required at permanent posts and stations, which is based upon the estimate for fiscal year 1918, plus a small increase to allow for advance in the cost of material and labor. The amount estimated for cantonments, various camps, etc., is \$149,536.

Philippine Islands.—The estimate, \$3,400, is the amount asked for by the Department authorities.

Item R. S. 122e. —Incandescent lamps.

[Estimate, fiscal year 1919, \$162,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$160,000.00	.....	\$160,000.00	\$2,000.00	.....	\$2,000.00	\$162,000.00
Appropriated, fiscal year 1918.....	41,806.00	.....	41,806.00	2,375.00	.....	2,375.00	44,181.00
Expended, fiscal year 1917.....	24,616.04	.....	24,616.04	2,000.00	.....	2,000.00	26,616.04

REMARKS.

Supplies.—This estimate provides for the purchase of such incandescent lamps as may be required to meet current requirements at posts where electricity is used for lighting.

United States.—Estimate is submitted for \$160,000 for purchase of incandescent lamps during the fiscal year 1919. This is \$135,383.96 more than the cost for the fiscal year 1917, but is necessary owing to the greater number of buildings requiring lights due to the increase in the Army, particularly for cantonment buildings and various camps.

NOTE.—The per capita cost of incandescent lamps in the United States in the fiscal year 1917 was approximately \$0.3339, and the Philippine Islands \$0.0542 per annum.

Of the above amount it is estimated that \$42,000 will be required at permanent posts, which is based upon the estimate for fiscal year 1918 plus a small increase to allow for advance in cost of supplies. Amount estimated for cantonment requirements, various camps, etc., is \$118,000.

Philippine Islands.—Estimate is made for \$2,000, the amount called for by the department authorities.

Item R. S. 122f.—Installation and extension of lighting systems.

[Estimate fiscal year 1919, \$384,355.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....		\$350,555.00	\$350,555.00		\$33,800.00	\$33,800.00	\$384,355.00
Appropriated, fiscal year 1918.....		478,974.50	478,974.50		66,000.00	66,000.00	544,974.50
Expended, fiscal year 1917.....		20,563.73	20,563.73		22,377.23	22,377.23	42,940.96

REMARKS.

Services.—The services to be procured under this item consist of such job and contract services as may be required for the construction and extension of electric lighting systems, wiring, etc., at the various Army posts enumerated.

United States.—Estimate is made for \$350,555 for services required as follows:

For lighting (wiring and fixtures) in new buildings estimated for under "Barracks and quarters," appropriation fiscal year 1919.....	\$1,291
For electric fixtures in new hospitals and hospital stewards' quarters (see appropriation "Construction and repair of hospitals, 1919").....	55,666
To provide for projects (installation of fixtures in buildings already constructed).....	293,598
Total.....	350,555

There are at present two garrisoned posts lighted by gas, Fort Porter, N. Y., and Wayne, Mich. Twenty-five permanent posts and stations are lighted by mineral oil. The following is a list of projects estimated for under this item:

Post.	Project.	Amount.
Fort Bayard, N. Mex.....	Enlargement of electrical plant.....	\$11,250.00
Fort Casey, Wash.....	Water purification system for power plant.....	5,400.00
Governors Island, N. Y.....	Changing lighting system from direct to alternating current.	12,000.00
Fort Hancock, N. J.....	Electric installation in central power plant.....	1,050.00
Fort Logan, Colo.....	Rewiring of buildings.....	15,000.00
Fort Michie, N. Y.....	Electric lighting system.....	3,603.00
Fort Monroe, Va.....	Electric lighting in main barracks No. 5.....	6,000.00
Fort Morgan, Ala.....	Installing rotary converters in central power plant for furnishing light and power to batteries.	4,500.00
Pittsburgh Storage Supply Depot, Pa....	Electric wiring and fixtures in buildings 2 and 3, 7 new street lamps, etc.	2,436.00
Reno Remount Depot, Okla.....	Electric pumps for lighting buildings.....	5,469.00
Schofield Barracks, Hawaii.....	Wiring for electric lighting in cantonments.....	62,520.00
Fort Sill, Okla.....	Street lights at ends of bridges.....	1,401.00
Fort Snelling, Minn.....	Changing present direct current distributing system to a proper alternating current system.	22,500.00
Army War College, Washington Barracks, D. C.	9 boulevard lamp standards with necessary equipment.	2,100.00
Fort Dupont, Del.....	Extension of pumping plant to power plant for lighting and ice making purposes.	47,499.00
Fort Monroe, Va.....	Purchase and installation of a Diesel oil engine for making alterations and additions to the pipe lines, post and coast artillery school power plant.	39,264.00
Fort, Niagara, N. Y.....	Installation of electric lighting interior and exterior.	29,856.00
Fort Sill, Okla.....	New 8½ by 10 inch triplex motor pump.....	14,250.00
Presidio of San Francisco, Cal.....	Changing of multiple street lighting system E and W cantonment to series tungsten system.	3,750.00
Fort Winfield Scott, Cal.....	Extension of street lighting system.....	3,750.00
Total.....		293,598.00

Philippine Islands.—The estimate from the Philippine Islands for construction under this item calls for \$33,000, and is to provide for the following work:

Augur Barracks.—For installation of an electric lighting system: Supplies, \$5,000; services, \$2,000. Garrison, First and Thirteenth Battalions, Philippine Scouts.

There has been a new power plant for ice, cold storage, and pumping installed at this post, and it is the intention to provide an electric lighting system in connection therewith for the lighting of both interior and exterior.

Camp Eldridge.—For the installation of a hydroelectric plant: Supplies, \$7,000; services, \$4,000. Garrison, First Battalion, Thirty-first Infantry. There is sufficient water and elevation for the development of a hydroelectric plant for light and power purposes available on the reservation. An intake has recently been constructed for the water system which will be used as a headwork for the penstock of the new hydroelectric system.

Camp John Hay.—For the extension of the present lighting system: Supplies, \$2,000; services, \$800. Garrison, M, Twenty-seventh Infantry, Second Battalion, Philippine Scouts. The hydroelectric plant has been in successful operation for several years, and only a few buildings are not supplied with current for light and power purposes from this system. It is desired to complete the project so that the hydroelectric plant current is utilized for all power, lighting, heating, and cooking purposes.

Fort Mills.—For the extension of underground transmission lines: Supplies, \$5,000; services, \$2,000. Garrison, A, Third Engineers, First Company Second Aero Squadron, Ninth Band, and 17 companies Coast Artillery Corps, Thirteenth Infantry, Fifth and Eleventh Battalions, Philippine Scouts. This is required to continue the main transmission lines, underground system so as to connect the several buildings with the post electric system, in addition to the funds that are allotted to the individual projects, and consist of the "feeder" system.

Pettit Barracks.—For the installation of an interior and exterior lighting system: Supplies, \$4,000; services, \$2,000. Garrison, Fourth Battalion, Philippine Scouts. The municipal authorities intend to construct in the near future an electric power plant for the city of Zamboanga, and they are providing sufficient capacity for the requirements of the garrison at Pettit Barracks. It is the intention to purchase current from this municipal plant at the reservation line, and the funds asked for are required to install the necessary interior and exterior lighting system within the reservation.

Item R. S. 122g.—Repairs to lighting plants and systems.

[Estimate fiscal year 1919, \$643,011.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$632,011.00		\$632,011.00	\$11,000.00		\$11,000.00	\$643,011.00
Appropriated fiscal year 1918.....	107,060.00		107,060.00	9,000.00		9,000.00	116,060.00
Expended fiscal year 1917.....	35,835.04		35,835.04	9,650.00		9,650.00	45,485.04

REMARKS.

United States.—Of the total of the estimate for the United States there will be required for services to meet current requirements incident to repairs to lighting plants and systems \$70,200, and \$561,811 for supplies, such as brushes, push buttons, oil cans, carbons, fuses, gas pipe, gaskets, tools, paint, packing, plugs, sheet lead and copper, parts for switches, tubes, wire, zinc, and other miscellaneous articles required for repairs and maintenance of lighting apparatus, etc. The amount estimated for is \$596,175.96 more than the cost for the fiscal year 1917, due to the increased strength of the Army.

Of the above amount it is estimated that \$120,000 will be required at permanent posts and stations, which is based upon the estimate for fiscal year 1918, plus a small increase to allow for advance in cost of material and labor. The amount estimated for cantonment requirements, various camps, etc., is \$512,011.

Philippine Islands.—For repairs to lighting plants and systems at all posts in the Philippine Department, having these facilities, \$11,000 is estimated. The increase of \$2,000 asked for over previous fiscal year is due to increased cost of material.

Item R. S. 122h.—Fuel for operation of lighting plants.

[Estimate fiscal year 1919, \$500,000.]

	United States.			Philippine Islands.			Grand total.
	Current re- quirements.	New construc- tion.	Total.	Current require- ments.	New construc- tion.	Total.	
Estimate.....	\$490,000.00	.....	\$490,000.00	\$10,000.00	.....	\$10,000.00	\$500,000.00
Appropriated fis- cal year 1918.....	112,036.00	.....	112,036.00	3,600.00	.....	3,600.00	115,636.00
Expended fiscal year 1917.....	60,291.52	.....	60,291.52	7,500.00	.....	7,500.00	67,791.52

REMARKS.

Under this item are purchased such quantities of coal, wood, fuel oil, etc., as may be required for the operation of the Government plants in which electricity for lighting is generated.

Based on the per capita cost for the fiscal year 1917 the amount required for the fiscal year 1919 would be approximately \$1,250,000, but it is believed that the amount estimated for will be sufficient.

Item R. S. 123.—Fuel required in the operation of modern batteries at established posts.

[Estimate, fiscal year 1919, \$200,000.]

	United States.			Philippine Islands.			Grand total.
	Current require- ments.	New construc- tion.	Total.	Current require- ments.	New construc- tion.	Total.	
Estimate.....	\$160,400.00	.....	\$160,400.00	\$30,600.00	.....	\$30,600.00	\$200,000.00
Appropriated fiscal year 1918.....	100,000.00	.....	100,000.00	55,600.00	.....	55,600.00	155,600.00
Expended fiscal year 1917	12,981.08	.....	12,981.08	30,600.00	.....	30,600.00	43,581.08

REMARKS.

The supplies to be purchased under this item consist of such fuel as coal, wood, fuel oil, gasoline, etc., as may be required for the operation of modern batteries at Coast Artillery posts.

Forts at which electric plants for power and light (including searchlights) have been installed, and the total number of batteries at each:

Posts.	Number of batteries.	Posts.	Number of batteries.
Lyon.....	2	McKinley.....	9
Preble.....	4	Levett.....	4
Williams.....	6	Foster.....	2
Stark.....	4	Heath.....	1
Banks.....	2	Strong.....	7
Warren.....	5	Standish.....	7
Andrews.....	5	Revere.....	4
Rodman.....	5	Adams.....	6
Wetherill.....	7	Getty.....	3
Greble.....	4	Philip Kearney.....	3
Mansfield.....	3	H. G. Wright.....	8
Michie.....	5	Terry.....	11
Slocum.....	4	Schuyler.....	4
Totten.....	7	Wadsworth.....	12
Hamilton.....	11	Hancock.....	13
Mott.....	5	Delaware.....	5
Du Pont.....	6	Howard.....	6
Smallwood.....	2	Carroll.....	3

Posts.	Number of batteries.	Posts.	Number of batteries.
Washington.....	8	Monroe.....	12
Armistead.....	4	Caswell.....	7
Hunt.....	4	Sumter.....	1
Wool.....	5	Taylor.....	10
Moultrie.....	9	DeSota.....	2
Screven.....	6	McRee.....	2
Dade.....	6	Gaines.....	2
Pickens.....	7	Jackson.....	2
Morgan.....	5	San Jacinto.....	4
St. Phillips.....	6	Rosecrans.....	3
Travis.....	2	Winfield Scott.....	16
Crockett.....	3	Barry.....	5
Miley.....	4	Stevens.....	9
McDowell.....	2	Canby.....	2
Baker.....	5	Flagler.....	9
Columbia.....	3	Whitman.....	1
Worden.....	12		
Casey.....	10	Total batteries.....	387
Ward.....	4	Total forts.....	71

Power plants at coast artillery posts.

STEAM-DRIVEN SETS.

[Used for fortification purposes and post lighting; estimated service, 24 hours per day.]

Sets.	Sets.
120-kilowatt..... 1	30-kilowatt..... 8
80-kilowatt..... 2	25-kilowatt..... 4
75-kilowatt..... 6	20-kilowatt..... 2
60-kilowatt..... 1	15-kilowatt..... 1
50-kilowatt..... 10	10-kilowatt..... 2
35-kilowatt..... 2	

(Used for emplacement lighting and power; estimated service, 4 hours per day.)

Sets.	Sets.
80-kilowatt..... 2	25-kilowatt..... 4
60-kilowatt..... 4	20-kilowatt..... 2
55-kilowatt..... 1	15-kilowatt..... 9
50-kilowatt..... 3	10-kilowatt..... 9
40-kilowatt..... 1	7-kilowatt..... 3
35-kilowatt..... 4	5-kilowatt..... 5
30-kilowatt..... 3	

(Used for searchlights only; estimated service, 4 hours per week.)

Sets.	Sets.
35-kilowatt..... 5	15-kilowatt..... 4
30-kilowatt..... 1	10-kilowatt..... 17
25-kilowatt..... 3	

OIL ENGINE SETS.

(Used for fortification purposes and post lighting; estimated service, 24 hours per day.)

Sets.	Sets.
25-kilowatt.....	1

(Used for emplacement lighting and power; estimated service, 4 hours per day.)

Sets.	Sets.
25-kilowatt..... 2	10-kilowatt..... 1
15-kilowatt..... 3	5-kilowatt..... 1

(Used for searchlights only; estimated service, 4 hours per week.)

Sets.
10-kilowatt..... 7

(Used for mining casements only; estimated service, 24 hours per day.)

	Sets.
1/4-kilowatt.....	23

GASOLINE SETS.

(Used for emplacement light and power; estimated service, 4 hours per day.)

	Set.	Sets.
50-kilowatt.....	1	25-kilowatt..... 128

(Used for searchlight only; estimated service, 4 hours per week.)

	Sets.	Sets.
50-kilowatt.....	1	10-kilowatt..... 30
25-kilowatt.....	101	

(Now being purchased for various purposes, estimated service, average 4 hours per day.)

	Sets.
25-kilowatt.....	349

There have been four additional sets of gasoline-electric generating sets installed during the fiscal year 1917 for which fuel will be required, and it is contemplated to install a number of additional sets during the fiscal year 1918. On account of the irregular hours at which the engines of modern batteries are run, it is difficult to estimate the amount required for the purchase of fuel for this purpose, but it is believed the amount estimated for will be sufficient.

Orders have been placed for the purchase of three hundred and forty-nine 25-kilowatt generating sets for installation at the coast defenses of the United States, for emplacement and searchlight use, but on account of the demand for similar equipment for use abroad it is believed that of the equipment ordered not more than about 50 generating sets will be installed during the fiscal year 1918.

Item R. S. 124.—Engine supplies required in the operation of modern batteries at established posts.

[Estimate fiscal year 1919, \$50,000.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New construc-tion.	Total.	Current require-ments.	New construc-tion.	Total.	
Estimate.....	\$45,000.00		\$45,000.00	\$5,000.00		\$5,000.00	\$50,000.00
Appropriated, fiscal year 1918.	17,280.00		17,280.00	5,000.00		5,000.00	22,280.00
Expended, fiscal year 1917....	12,096.48		12,096.48	4,950.00		4,950.00	16,046.48

REMARKS.

The supplies to be purchased under this item consist of waste, lubricating oils, oil lamps in battery plants, brooms, brushes, coal handling and firing tools and appliances, etc., necessary for the maintenance, operation, and preservation of electric plants at Coast Artillery posts, as provided in paragraph 8 of General Orders, No. 72, War Department, 1906, as follows:

GENERAL ORDERS, }
No. 72.

WAR DEPARTMENT,
Washington, April 11, 1906.

The following regulations regarding the supplies to be furnished for the service of the seacoast fortifications and the various departments by which they are to be furnished are published for the information and guidance of all concerned:

FOR FORTIFICATIONS IN GENERAL.

8. The Quartermaster's Department will furnish all fuel and engine supplies such as waste, lubricating oils, oil lamps, brooms, brushes, coal handling and firing tools, and appliances, etc., necessary for the maintenance, operating, and preservation of

all electric plants. For central plants which furnish current to the post as well as to the fortifications, it will, in addition, furnish all material and funds necessary for their repair and preservation. (A. R. 1066). It will also furnish such materials as may be needed for the use of the battery mechanics, all grass-cutting tools, and all carpenters' tools. When under the provisions of paragraph 1535, Army Regulations, any seacoast post or any part of it has been turned over to and garrisoned by the Coast Artillery all repairs to the post buildings and to all plumbing, water-supply, and sewer systems, roads, walks, and ground will be made by the Quartermaster's Department, governed in this work by the provisions of paragraph 1534, Army Regulations.

By order of the Secretary of War.

J. C. BATES,
Lieutenant General, Chief of Staff.
F. C. AINSWORTH,
The Military Secretary.

Based on the per capita cost for the fiscal year 1917, the amount required for the fiscal year 1919 would be approximately \$300,000, but it is believed that the amount estimated for will be sufficient.

Item R. S. 125. -- Post bakeries, construction of.

[Estimate fiscal year 1919, \$11,250.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....		\$5,250.00	\$5,250.00		\$6,000.00	\$6,000.00	\$11,250.00
Appropriated fiscal year 1918.....					8,500.00	8,500.00	8,500.00
Expended fiscal year 1917.....		4,741.76	4,741.76				4,741.76

Item R. S. 125a.—Post bakeries, repair of.

[Estimate fiscal year 1919, \$41,907.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$35,907.00		\$35,907.00	\$6,000.00		\$6,000.00	\$41,907.00
Appropriated, fiscal year 1918.....	6,272.00		6,272.00	5,000.00		5,000.00	11,272.00
Expended, fiscal year 1917.....	5,521.56		5,521.56	6,102.00		6,102.00	11,623.56

REMARKS.

United States.—The amount estimated for under this item is required for the construction of post bakeries as follows:

McKinley, Me., addition to post bakery..... \$5,250.00

Philippine Islands.—The amount called for by department authorities is \$6,000 and is for construction of extensions to post bakeries for several posts in the Philippine Department, made necessary by increases to garrisons. It is estimated that funds asked for will be sufficient for all posts during this fiscal year. This estimate is \$2,500 less than that called for in fiscal year 1918.

REMARKS.

Supplies.—The supplies to be purchased under this item consist of such building materials as are required for repairing buildings used at post bakeries.

Services.—The services to be procured consist of the hired labor required for repairs, post bakeries.

United States.—Of the total estimate for the United States there will be required \$19,907 to meet the current requirements for supplies and \$16,000 for services. The amount estimated for is \$30,385.44 greater than the cost for the fiscal year 1917, and \$29,635 more than the apportionment for the fiscal year 1918, due principally to the increased strength of the Army and the cantonments required therefor.

Of the above amount it is estimated that \$6,000 will be required at permanent posts, and for cantonment requirements, various posts, etc., \$29,907 will be required.

Philippine Islands.—The amount submitted by the department authorities under this item is \$6,000, which is to provide for current repairs to post bakeries at all posts in the Philippine Department. The increase over the estimate for the fiscal year 1918 is made necessary by the rapid deterioration of several of the wooden buildings, the funds allotted in the previous fiscal years having been insufficient to continue the repairs as they should be.

Item R. S. 126. Bake ovens, and apparatus pertaining thereto (purchase of, construction of).

[Estimate fiscal year 1919, \$183,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$180,000.00	.....	\$180,000.00	\$3,000.00	.....	\$3,000.00	\$183,000.00
Appropriated, fiscal year 1918.....	76,966.00	.....	76,966.00	1,000.00	.....	1,000.00	77,966.00
Expended, fiscal year 1917..	65,832.72	.....	65,832.72	1,160.00	.....	1,160.00	66,992.72

REMARKS.

Supplies.—This item consists of the purchase of bake ovens required at permanent posts and cantonments to equip post bakeries being constructed and to replace such bake ovens as become unserviceable; also field bakeries for use with troops in the field.

What is known as the Marshall oven is now supplied in sizes as follows to meet the needs of posts: No. 30, capacity 480 rations, cost \$650; No. 40, capacity 576 rations, cost \$700; No. 50, capacity 780 rations, cost \$775; No. 60, capacity 1,008 rations, cost \$825. The life of these ovens is approximately five years.

Field bakeries are established for war service at the rate of one to each division and for peace service in such number within each territorial department as may be authorized from time to time by the Secretary of War. The cost of a field bakery complete is approximately \$9,600. As it is contemplated that all troops will be equipped with field bakeries during the current fiscal year, no amount is included in the estimate for this purpose.

United States.—The estimate submitted herewith is an increase of \$114,167.28 over the cost for the fiscal year 1917 and is due entirely to war conditions and the increased strength of the Army.

Of the above amount it is estimated that \$80,000 will be required at permanent posts and stations, which is based upon the estimate for the fiscal year 1918 plus a small increase to allow for advance in the cost of material and labor. The amount estimated for cantonment requirements, various camps, etc., is \$100,000.

Philippine Islands.—The estimate of \$3,000 is the amount submitted by department authorities and is to provide for purchase of the necessary bake ovens and appurtenances thereto for all posts in the Philippine department. This amount will be necessary to purchase new ovens to replace those that have been in service a number of years, more especially the obsolete type of Middleby oven, of which there are several in the department, as these are uneconomical and are being replaced as rapidly as possible. The increase in this item is \$2,000 over the amount called for fiscal year 1918.

Item R. S. 126a.—Bake ovens and apparatus, repair of.

[Estimate fiscal year 1919, \$514,067.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$510,567.00	.....	\$510,567.00	\$3,500.00	.....	\$3,500.00	\$514,067.00
Appropriated fiscal year 1918.....	6,265.00	.....	6,265.00	3,000.00	.....	3,000.00	9,265.00
Expended fiscal year 1917.....	27,881.40	.....	27,881.40	3,420.00	.....	3,420.00	31,301.40

REMARKS.

Supplies.—The supplies to be procured under this item consist of such articles as lime, tin, sheet iron, bricks, tools, utensils, etc., as are required for the repair of bake ovens and apparatus therefor; also for field bakeries. Bake ovens are installed at all of the Army posts and field bakeries for troops in camp and at cantonments.

United States.—The estimate is \$482,685.60 more than the cost for the fiscal year 1917 and is necessary on account of the increased strength of the Army necessitated by war conditions. Bake ovens and field bakeries in use at posts and camps deteriorate very rapidly.

Of the above amount it is estimated that \$4,500 will be required for use at permanent posts in the United States, and \$29,907 for use in cantonments, various camps, etc., for the repair of bake ovens and apparatus, and \$476,160 for the repair of field bakeries, assuming that there will be approximately 80 field bakeries to be repaired, at an estimated cost of upkeep of \$5,952 each, or 62 per cent of the initial cost.

Philippine Islands.—The amount called for by department authorities is \$3,500 and is to provide for current repairs to bake ovens and appurtenances thereto to all posts in the Philippine Department. This small increase over the estimate for fiscal year 1918 is made necessary by advance of cost in materials.

Item R. S. 127.—Ice machines, purchase and installation of.

[Estimate fiscal year 1919, \$1,485,761.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$1,474,861	\$1,474,861	.....	\$10,900	\$10,900	\$1,485,761
Appropriated fiscal year 1918.....	6,300	6,300	6,300
Expended fiscal year 1917.....

REMARKS.

United States.—Amounts submitted under this item are for construction and additions to ice and refrigerating plants as per the following list:

Fort Apache, Ariz., new ice and refrigerating machine.....	\$2,250
Walter Reed General Hospital, D. C., refrigerating machine.....	4,611
Dade, Fla., reconstruction of ice plant.....	8,000
United States Disciplinary Barracks, Fort Leavenworth, Kans., 40-ton ice-making plant.....	60,000

Total..... 74,861

Of the amount estimated for under this item \$74,861 will be required for installation of ice machines, etc., at permanent posts in the United States. It is estimated that \$1,400,000 will be required to provide for small ice and refrigerating plants for 20 cantonments in France, at an approximate cost of \$70,000 each or \$1,400,000 in addition

to the large ice plant now being installed there, which is to take care of approximately 1,000,000 men.

Philippine Islands.—Estimate is submitted for \$10,900 the amount called for by the department authorities. It is an increase of \$4,600 over the estimate for the fiscal year 1918 and is to provide for the following construction:

For purchase of the necessary ice machines for several posts in the Philippine Department, supplies, \$4,000; services, \$1,600. Several posts in this department are provided with ice machines that are 15 years old, and it is necessary to place in stock at depot and provide for the installation of machines to replace those that will be past repairs, it being the policy to install new machines when present ones are past economical repair, machines so replaced being utilized to repair machines at other posts.

Fort Mills.—For purchase of ammonia condenser, supplies, \$2,000; services, \$1,000. Garrison: A. Third Engineers, First Company Second Aero Squadron, Ninth Band, and 17 Companies Coast Artillery Corps, Thirteenth Infantry, Fifth and Eleventh Battalions Philippine Scouts. The present ammonia condenser in the bomb-proof power plant is past repair. A new one should be provided at once. A temporary condenser has been erected on the exterior of the building for use in emergency until a new one can be installed to replace the one on the mezzanine floor of the power plant.

Fort San Pedro (Iloilo).—For purchase of boilers, supplies, \$1,600; services, \$700. Garrison: Headquarters Tenth Battalion, Headquarters Company Thirty-eighth, Thirty-ninth, and Fortieth Companies, Philippine Scouts. The boilers used in conjunction with the power plant will have to be condemned during this year and new ones will have to be supplied.

DESCRIPTION OF ICE-MAKING AND REFRIGERATING PLANTS FURNISHED FOR USE OF TROOPS IN FRANCE
WITH CAPACITY AND COST OF INSTALLATION.

The ice and cold-storage plant being erected in France for the expeditionary army will have an ice-making capacity of 500 tons of ice per day and storage capacity for 5,000 tons of frozen beef and 600 tons of manufactured ice. Provision has also been made for using about one-fifth of the total storage space for provisions, vegetables, eggs, etc.

This plant will be a complete unit in itself, having installed 2,700 boiler horsepower, 1,575 tons refrigerating capacity, 13,000 gallons per minute water pumping and circulating capacity, and 300 K. V. A. electric generating capacity.

The plant will have complete trackage facilities for loading and unloading cars, also a complete layout for the icing of refrigerator cars. A laundry has also been provided, this being considered particularly desirable, as the working clothing of both the machinery operators and the meat handlers rapidly becomes dirty, and as it is especially desirable in the case of the men handling meat that they wear at all times clean frocks. There is also provided a machine shop, with machinery which will be required for the maintenance of the plant in operation.

This plant is to be operated by a military unit, Ice Plant Company No. 301, consisting of 15 officers and 335 enlisted men, and quarters for housing this unit are being provided.

The estimated cost and amount allotted for the plant was \$2,091,275, and allotments of this amount to the extent of \$1,115,707 have been made to date.

Item R. S. 128.—Maintenance, ice machines.

[Estimate fiscal year 1919, \$525,783.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New construc-tion.	Total.	Current require-ments.	New construc-tion.	Total.	
Estimate.....	\$426,543.00	.....	\$426,543.00	\$99,240.00	.....	\$99,240.00	\$525,783.00
Appropriated fiscal year 1918.....	4,479.00	.....	4,479.00	90,000.00	.....	90,000.00	94,479.00
Expended fiscal year 1917.....	44,701.64	.....	44,701.64	53,957.00	.....	53,957.00	98,658.64

REMARKS.

Supplies.—The supplies to be purchased under this item consist of salt, ammonia, mineral oil, wood, etc., for the maintenance of ice plants and pipe and boiler fittings, packings, pumps, and numerous other supplies required for repairs.

Services.—The services consist of the hire of mechanics and laborers required to make repairs to ice machines and refrigerating plants.

United States.—Of the total amount estimated for the United States there will be required for current requirements \$284,343 for supplies and \$142,200 for services. The amount estimated for is \$381,841.36 greater than the cost for the fiscal year 1917, which is necessitated by the increased strength in the Army due to war conditions and also on account of the depreciation in present machines.

The ice plants in service in the United States are, with few exceptions, operated in connection with pumping or power plants, and the cost of operation is, therefore, reduced to a minimum, and in many cases a proportionate charge of cost of operation is not made, the production of ice being considered a by-product. The amount estimated, therefore, does not include fuel and labor, but is considered for the repair and maintenance of the apparatus itself.

The following is a list of ice plants in the United States:

Apache.....	1	Bayard.....	1
Dade.....	1	Screven.....	1
San Juan.....	1	Clarke.....	1
McIntosh.....	1	Presidio, San Francisco General Hos-	
Oglethorpe.....	1	pital.....	1
Sam Houston.....	1	Hot Springs.....	1
Caswell.....	1	Army and Navy General Hospital...	1
Huachuca.....	1	Bliss.....	1
Morgan.....	1		
Sill.....	1	Total.....	17

Philippine Islands.—The estimate as submitted by department authorities is \$99,240. It is \$9,240 more than the estimate for the fiscal year 1918, and is for the maintenance of ice machines at the various posts in the Philippine Department, of which there are now 35 in operation. (Supplies \$60,000, services \$36,000.) The increase over the estimate for 1918 is the actual sum required to cover the advanced cost of materials.

Camp Overton.—For the insulation of ice tanks: Supplies, \$950; services, \$670. Garrison consists of the Forty-eighth Company, Philippine Scouts. Insulation of the present ice tanks at this post has been badly eaten by white ants and will have to be entirely replaced during the fiscal year.

Pettit Barracks.—For insulation of ice tanks: Supplies, \$950; services, \$670. Garrison consists of the Fourth Battalion, Philippine Scouts. The ice tanks at Pettit Barracks are in exactly the same condition as those at Camp Overton. The large amount required by the Philippine Islands under this item includes fuel for operating the plants which is necessitated by the large number and capacity of the machines installed at nearly all of the posts in the islands in order to meet the requirements of the climate. The amount estimated for includes all supplies, fuel, and repairs as the ice plants in the Philippine Islands are in most cases operated alone as ice plants.

Ice machines are in operation in the Philippine Department at the following posts and stations:

Camp John Hay.....	2	Fort Wint.....	2
Camp Stotsenburg.....	2	Augur Barracks.....	3
Camp McGrath.....	2	Camp Overton.....	2
Fort Wm. McKinley.....	2	Pettit Barracks.....	3
Ludlow Barracks.....	2	Camp Kiethley.....	2
Regan Barracks.....	2	Fort Mills.....	2
Warrick Barracks.....	2	Fort San Pedro, Iliolo.....	1
Tientsin, China.....	2		
Camp Eldridge.....	2	Total.....	33

Item R. S. 129. —Cold storage.

[Estimate fiscal year 1919, \$259,784.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$145,284.00	.....	\$145,284.00	\$114,500.00	.....	\$114,500.00	\$259,784.00
Appropriated fiscal year 1918..	7,696.00	.....	7,696.00	75,000.00	.....	75,000.00	82,696.00
Expended fiscal year 1917.....	58,219.24	.....	58,219.24	90,000.00	.....	90,000.00	148,219.24

REMARKS.

Supplies. The supplies to be purchased under this item consist of meat hooks, racks, lumber, asbestos for covering pipes and such other supplies as may be required.

Services.—The services to be procured consist of mechanics and labor necessary in the operation and maintenance of cold-storage plants. Cold storage is usually furnished in connection with ice machines at post.

United States.—Of the total estimated for the United States there will be required for current requirements \$20,750 for supplies and \$124,534 for services. The amount estimated for is \$87,064.76 more than the cost for the fiscal year 1917, and is due to the increased strength of the Army caused by war conditions.

Of the amount estimated under this item \$8,200 will be required at permanent posts and stations, which is based upon the estimate for fiscal year 1918 plus a small increase to allow for advance in the cost of material and labor. The amount estimated for cantonment requirements, various camps, and for cold storage in connection with ice plants in France, is \$137,084.

Philippine Islands.—The amount called for by department authorities under this item is \$114,500, which is an increase of \$24,500 over the cost for the fiscal year 1917. Of this amount \$75,000 is for rental of cold-storage space in Manila, and supplies \$10,000, and services \$5,000 for posts throughout the department. The remainder is required as follows:

Fort Wm. McKinley.—For increasing the capacity of present cold storage: supplies, \$10,000; services, \$5,000. Garrison, F. H. No. 4, A. C. No. 4, barracks Third Engineers, barracks Third Field Battalion, Signal Corps, Fifteenth Cavalry, Eighth Infantry, Headquarters and Third Battalion Thirty-first Infantry, casals. The above amount is required to extend and increase the capacity of the present cold storage at this post, made necessary by the increase in garrison, it being the intention to increase the capacity so as to provide more storage space and possibly reduce the cold-storage area that is now rented in the city of Manila, it being the intention to make Fort Mills and Fort McKinley cold-storage facilities sufficient to take care of a two months supply for these stations, this reserve now being held in leased cold-storage rooms in Manila.

Regen Barracks.—For reconstructing cold storage, supplies, \$3,000; services \$2,000. Garrison, Seventh Battalion, Philippine Scouts. The present cold storage at this post was originally of frame construction and is past repair. It will be necessary to reconstruct it entirely during the fiscal year 1919.

Tientsin, China.—For increasing cold-storage facilities, supplies, \$3,000; services, \$1,500. Garrison, Fifteenth Infantry. The present cold-storage accommodations are entirely too small, and it is imperative that cold-storage facilities be provided ample in capacity to supply the garrison.

Item R. S. 130.—Ice for issue to organizations of enlisted men at such places as the Secretary of War may direct.

[Estimate fiscal year 1919, \$6,760,000.]

	United States.			Philippine Islands.			Grand total.
	Current re-quirements.	New con-struction.	Total.	Current re-quirements.	New con-struction.	Total.	
Estimate	\$6,756,200.00	.....	\$6,756,200.00	\$3,800.00	.....	\$3,800.00	\$6,760,000.00
Appropriated fiscal year 1918	85,000.00	.....	85,000.00	2,800.00	.....	2,800.00	87,800.00
Expended fiscal year 1917	360,874.68	.....	360,874.68	3,830.00	.....	3,830.00	364,704.68

REMARKS.

This item covers the supply of ice to organizations of enlisted men of the Army. Issues are made when practicable, as follows:

For each ration, 4 pounds; the maximum allowance to any organization or detachment of less than 100 men to be 100 pounds per day, and to organizations of 100 men or more to be 1 pound per day for each man.

For troops stationed north of the thirty-seventh parallel of north latitude, and where from any cause it is impracticable to cut and store ice for their use, the allowance will be for seven months only, beginning April 1 and ending October 31, except in the States of Washington, Oregon, and Idaho where, during the remainder of the year one-half of such allowance may be issued, and in the State of California, where the full allowance may be issued for the entire year.

To troops stationed south of the thirty-seventh parallel of north latitude, the full allowance may be issued for the entire year.

At posts where it is practicable during the cold season to cut and store ice required, no issues of ice will be allowed from funds of the Quartermaster Corps as long as such stored ice is available.

Ice is issued to all enlisted men, and Army Regulations regarding same are embodied in section 10, paragraph 1215. The price of ice purchased for issue to troops in the United States averages about 30 cents per hundred pounds, ranging from 10 cents per hundred pounds at northern posts, to 75 cents per hundred pounds at southern posts. In the Philippine Islands ice costs about 24 cents per hundred pounds.

When ice plants are operated by the Quartermaster Corps the issues of ice are made upon requisitions approved by the commanding officer.

Estimate for the fiscal year 1919 is based on the per capita cost for the fiscal year 1917

Item R. S. 131.—Ice for issue to offices, at such places as the Secretary of War may direct.

[Estimate fiscal year 1919, \$140,000.]

	United States.			Philippine Islands.			Grand total.
	Current re-quirements.	New con-struction.	Total.	Current re-quirements.	New con-struction.	Total.	
Estimate	\$137,800.00	.....	\$137,800.00	\$2,200.00	.....	\$2,200.00	\$140,000.00
Appropriated, fiscal year 1918	7,000.00	.....	7,000.00	2,200.00	.....	2,200.00	9,200.00
Expended, fiscal year 1917	5,377.96	.....	5,377.96	2,200.00	.....	2,200.00	7,577.96

REMARKS.

This item covers the purchase of ice for issue to officers at headquarters of departments, brigades, posts, depots, arsenals, etc.

Estimate for the fiscal year 1919 is based on the per capita cost for the fiscal year 1917.

R. S. 132.—Ice for preservation of stores.

Estimate fiscal year 1919, \$460,000.]

	United States.			Philippine Islands.			Grand total.
	Current re-quirements.	New con-struction.	Total.	Current re-quirements.	New con-struction.	Total.	
Estimate.....	\$455,000.00	.....	\$455,000.00	\$5,000.00	.....	\$5,000.00	\$460,000.00
Appropriated fiscal year 1918.....	18,000.00	.....	18,000.00	5,000.00	.....	5,000.00	23,000.00
Expended fiscal year 1917..	19,815.04	.....	19,815.04	5,000.00	.....	5,000.00	24,815.04

REMARKS.

This item covers the procurement of ice for the preservation of subsistence stores of a perishable nature. Issues are authorized for this purpose in such quantities as the commanding officer may order as necessary, and the quantities required depend upon the necessities of the service.

Estimate for the fiscal year 1919 is based on the per capita cost for the fiscal year 1917.

Item R. S. 133.—Laundries, construction of.

[Estimate fiscal year 1919, \$6,062,250.]

	United States.			Philippine Islands.			Grand total.
	Current quirements.	New con-struction.	Total.	Current requirements.	New con-struction.	Total.	
Estimate.....	\$6,047,250.00	\$6,047,250.00	.....	\$15,000.00	\$15,000.00	\$6,062,250.00
Appropriated fiscal year 1918.....
Expended fiscal year 1917.....	9,066.32	9,066.32	.....	58,319.00	58,319.00	67,385.32

REMARKS.

United States.—The amount estimated under this item is to provide for a laundry at Fort Slocum, N. Y., at a cost of \$47,250.

On the basis of 20 cantonments to each 1,000,000 men in France, it is estimated that one laundry plant complete at a cost of \$200,000 will be required for each cantonment, and estimating that 1,500,000 men will be in France, there will be required 30 laundry plants, at a total cost of \$6,000,000.

Philippine Islands.—The amount estimated by the department authorities is \$15,000 and is to provide for the following work.

Fort Mills: For the construction of laundry (supplies, \$10,000; services, \$5,000). The garrison consists of Company A, Third Engineers, and First Company, Second Aero Squadron, Ninth Band, and 17 companies of Coast Artillery; Thirteenth Infantry, Fifth and Eleventh Battalion Philippine Scouts. The present garrison has been increased in the last three years to such an extent as to require the construction of this plant, it being imperative to provide modern laundry facilities at this garrison in order to economize on the water used for all laundering purposes.

Item R. S. 133a.—Laundries, repair of.

[Estimate fiscal year 1919, \$617,017.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construc-tion.	Total.	Current requirements.	New construc-tion.	Total.	
Estimate.....	\$613,517.00	.....	\$613,517.00	\$3,500.00	.....	\$3,500.00	\$617,017.00
Appropriated, fiscal year 1918.....	2,200.00	.....	2,200.00	3,000.00	.....	3,000.00	5,200.00
Expended, fiscal year 1917..	2,795.36	.....	2,795.36	3,200.00	.....	3,200.00	5,995.36

REMARKS.

Supplies.—The supplies required under this item consist of lumber, bricks, nails, etc., required to make necessary repairs to post steam laundries.

United States.—Of the estimated amount, \$409,517 is required for supplies and \$204,000 for job and contract services necessary to make repairs. This is \$610,721.64 greater than the cost for the fiscal year 1917, due to conditions arising on account of the war.

Of the amount estimated under this item there will be required for permanent posts and stations \$2,750, which is based upon the estimate for the fiscal year 1918, plus a small increase, to allow for advance in the cost of material and labor. For repairs to laundries in France, on the basis of 30 cantonments, it is estimated that 10 per cent will be required for their repair, or a total of \$610,767.

Philippine Islands.—The amount estimated under this item by department authorities is \$3,500, which is \$500 in excess of the estimate for the fiscal year 1918. This amount will provide for current repairs to all laundries that are in operation in the Philippine Islands. The increase asked for above the estimate for 1918 is required to cover the advance in cost of supplies.

Item R. S. 134.—Laundries, operation and maintenance of.

[Estimate fiscal year 1919, \$639,922.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New construc-tion.	Total.	Current require-ments.	New construc-tion.	Total.	
Estimate.....	\$636,922.00	.....	\$636,922.00	\$3,000.00	.....	\$3,000.00	\$639,922.00
Appropriated, fiscal year 1918.....	5,141.00	.....	5,141.00	3,000.00	.....	3,000.00	8,141.00
Expended, fiscal year 1917.	231,560.52	.....	231,560.52	3,000.00	.....	3,000.00	234,560.52

REMARKS.

Supplies.—The supplies to be procured under this item consist of coal, soap, starch, wrapping paper and twine, marking tags, and such other supplies as may be required in the operation and maintenance of post steam laundries.

Services.—The services to be procured consist of the hiring of foreman, engineers, markers, washmen, starchers, mangle girls, and such other labor as may be necessary in the conduct of a post laundry plant.

NOTE.—The law provides that the proceeds of laundry work shall be used to defray the expense of operating the laundries; but it is necessary to have available a sum of money to begin the operation at the commencement of the laundries and to carry them on until such time as proceeds become available, otherwise there would be difficulty in procuring the supplies necessary and in paying the wages of employees. All laundries are practically self-supporting.

United States.—Of the total amount estimated for the United States there will be required \$336,922 for supplies and \$300,000 for services.

Laundries have been established at the following posts in the United States: United States Disciplinary Barracks, Alcatraz Island, Cal.; Army General Hospital, Fort Bayard, N. Mex.; Recruit Depot, Jefferson Barracks, Mo.; Columbus Barracks, Ohio, Recruit Depot; D. A. Russell, Wyo.; United States Disciplinary Barracks, Fort Leavenworth, Kans.; Recruit Depot, Fort Logan, Colo.; Fort Riley, Kans.; Fort Sam Houston, Tex.; Schofield Barracks, Hawaii; Fort Huachuca, Ariz.

Of the amount estimated under this item for the United States there will be required at permanent posts and stations \$6,922, which is based upon the estimate for the fiscal year 1918, plus a small increase to allow for advance in the cost of material and labor: \$630,000 is estimated to be required for the maintenance and operation, including all supplies, etc., on the basis of 30 cantonments, with one laundry plant to each cantonment in France and for various camps in the United States.

Philippine Islands.—The amount estimated under this item by department authorities is \$3,000, which is the same as the preceding fiscal year, and is to provide for the operation and maintenance of laundries in the Philippine Islands.

Laundry machinery for the equipment of a laundry plant in France, of a capacity to do the laundry work for 22,000 men, was purchased by the depot quartermaster, New York City, at a total cost of \$80,084.36.

Following is a list of the machinery and the cost of the different items:

1 disinfecter.....	\$5, 025. 36
22 extractors, \$396.10 each.....	8, 714. 20
8 tumblers, \$1,596 each.....	12, 768. 00
8 soap tanks, \$40 each.....	320. 00
60 garment presses, 38-inch, \$236. 50 each.....	14, 190. 00
50 truck tubs, \$35.50 each.....	1, 775. 00
10 earthen jars, \$5.95 each.....	59. 50
Extra parts:	
50 sets rubbers for extractors, \$3.25 each.....	162. 50
6 sets hinges and latches for tumbler cylinders, \$20 each.....	120. 00
16 washers, \$484.30 each.....	7, 748. 80
10 marking machines, \$312.50 each.....	3, 125. 00
1 set bearing shells, \$35.....	35. 00
200 pounds babbitt metal, \$0.28 per pound.....	56. 00
20 sets hinges and latches for washer cylinders, \$18.75 each.....	375. 00
10 outlet valves for washers, \$10.25 each.....	102. 50
4 sets rawhide main driving gears for flat-work machines, \$19 each....	76. 00
2 sets type for marking machine, \$12.50 each.....	25. 00
8 tampering tanks and connections, \$260 each.....	2, 080. 00
4 flat-work ironers.....	15, 560. 00
Extra cost for covering the above with wool blanketing, \$44 each.....	176. 00
30 sets of padding for rolls on flat-work ironer.....	2, 310. 00
Extra cost for furnishing wool padding for rolls of flat-work ironer, instead of knitted padding for the above 30 sets.....	1, 350. 00
30 sets outside canvas covering for rolls on flat-work ironer.....	930. 00
30 sets inside and outside canvas aprons for flat-work ironer.....	1, 572. 00
30 sets ribbons on feed of flat-work ironer.....	628. 50
200 sets of replacement coverings for Universal press.....	800. 00

Although this plant was designed for a capacity of 22,000 men, it is considered that the same can probably handle the work for at least 30,000 men.

In addition to the above machinery the depot quartermaster, New York City, has also been authorized to purchase the following material to provide a power plant for this equipment: Three steam boilers, 2 steam engines, 1 combined water heater and storage tank, complete, 2 steam boiler feed pumps, 2 boiler feed traps, 2 condensation receiving tanks, 78 steam traps, a quantity of millwright material, steam piping, valves, traps, fittings, plumbing fixtures, electrical material, etc.

The material for the installation of the power plant will cost approximately \$175,000, which, added to the cost of the machinery, gives a total cost of approximately \$225,084.36.

The award for the power plant material has not yet been made, therefore it is not known what the exact cost will be.

Item R. S. 135.—Laundry materials, issue of, for use of general prisoners confined at military posts without pay or allowances.

[Estimate fiscal year 1919, \$32,000.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New construc-tion.	Total.	Current require-ments.	New construc-tion.	Total.	
Estimate.....	\$31, 500. 00	.....	\$31, 500. 00	\$500. 00	.....	\$500. 00	\$32, 000. 00
Appropriated, fiscal year 1918.....	9, 375. 00	.....	9, 375. 00	500. 00	.....	500. 00	9, 875. 00
Expended, fiscal year 1917..	1, 237. 00	.....	1, 237. 00	497. 60	.....	497. 60	1, 734. 60

REMARKS.

The supplies purchased under this item consist of such articles as soap, starch, washtubs, boards, etc., as may be required for issue to prisoners. The estimated number of general prisoners to be provided for during the fiscal year 1919 is 41,806.

Estimate for the fiscal year 1919 is based on the per capita cost for the fiscal year 1917.

Item R. S. 136.—Laundry materials, issue of, for applicants for enlistment held under observation.

[Estimate fiscal year 1919, \$3,500.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$3,500.00		\$3,500.00				\$3,500.00
Appropriated, fiscal year 1918....	1,550.00		1,550.00				1,550.00
Expended, fiscal year 1917.....	202.32		202.32				202.32

REMARKS.

Under this item are purchased laundry materials, such as soaps, towels, starch, scrubbing boards, washtubs, etc., for issue to applicants for enlistments in the United States.

Estimate for the fiscal year 1919 is based on the per capita cost for the fiscal year 1917.

Item R. S. 137.—Soap, authorized issue of.

[Estimate fiscal year 1919, \$3,900,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$3,890,000.00		\$3,890,000.00	\$10,000.00		\$10,000.00	\$3,900,000.00
Appropriated fiscal year 1918.....	62,586.00		62,586.00	10,000.00		10,000.00	72,586.00
Expended fiscal year 1917.....	201,582.92		201,582.92	10,330.00		10,330.00	211,882.92

REMARKS.

The supplies purchased under this item consist of such soap as may be required for issue to the Army, as provided for in paragraph 1215, Army Regulations, 1913, as corrected to April 15, 1917.

Issues are authorized to organizations of enlisted men as follows:

For each ration, 0.64 ounce.

Under this item soap is also used for washing the laundry of enlisted men and in kitchens. A special allowance is usually authorized for guardhouse and military prisons; such amounts as are requested are authorized by the commanding officer.

Estimate for the fiscal year 1919 is based on the per capita cost for the fiscal year 1917.

Item R. S. 138.—Hire of employees.

[Estimate fiscal year 1919, \$350,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$280,000.00		\$280,000.00	\$70,000.00		\$70,000.00	\$350,000.00
Appropriated, fiscal year 1918.....	138,552.00		138,552.00	70,000.00		70,000.00	208,552.00
Expended, fiscal year 1917.....	163,653.64		163,653.64	70,000.00		70,000.00	233,653.64

REMARKS.

This item covers the hire of clerks, engineers, electricians, dynamo tenders, plumbers and steamfitters, watchmen, coal passers, and other employees.

The increase in the amount estimated for the fiscal year 1919 over the amount appropriated for the fiscal year 1918 will be required due to the great increase in the strength of the Army.

Item R. S. 139.—Furniture for post schools and libraries.

[Estimate fiscal year 1919, \$1,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$500.00	.....	\$500.00	\$500.00	.....	\$500.00	\$1,000.00
Appropriated, fiscal year 1918...	1,212.00	.....	1,212.00	500.00	.....	500.00	1,712.00
Expended, fiscal year 1917.....	202.24	.....	202.24	600.00	.....	600.00	802.24

REMARKS.

Under this item are purchased such articles as school desks and chairs, blackboards, tables, bookcases, and such other articles of furniture as may be required for post schools and libraries.

Estimate for the fiscal year 1919 is approximately the same as the cost for the fiscal year 1917.

Item R. S. 140.—Textbooks for post schools and libraries.

[Estimate fiscal year 1919, \$2,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$1,500.00	.....	\$1,500.00	\$500.00	.....	\$500.00	\$2,000.00
Appropriated, fiscal year 1918...	1,685.00	.....	1,685.00	500.00	.....	500.00	2,185.00
Expended, fiscal year 1917.....	1,130.12	.....	1,130.12	468.00	.....	468.00	1,598.12

REMARKS.

Under this item are purchased the necessary textbooks required for post schools and libraries at military posts.

Estimate for the fiscal year 1919 is approximately the same as the cost for the fiscal year 1917.

Item R. S. 141.—Paper for post schools and libraries.

[Estimate fiscal year 1919, \$300.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$200.00	.....	\$200.00	\$100.00	.....	\$100.00	\$300.00
Appropriated, fiscal year 1918...	285.00	.....	285.00	100.00	.....	100.00	385.00
Expended, fiscal year 1917.....	75.24	.....	75.24	100.00	.....	100.00	175.24

REMARKS.

Under this item are purchased paper, writing pads, etc., required for post schools and libraries at military posts.

Estimate for the fiscal year 1919 is approximately the same as the cost for the fiscal year 1917.

Item R. S. 142.—Equipment for post schools and libraries.

[Estimate fiscal year 1919, \$45,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$44,000.00	.....	\$44,000.00	\$1,000.00	.....	\$1,000.00	\$45,000.00
Appropriated, fiscal year 1918	11,051.00	.....	11,051.00	1,000.00	.....	1,000.00	12,051.00
Expended, fiscal year 1917....	199.84	.....	199.84	1,021.00	.....	1,021.00	1,220.84

REMARKS.

The supplies to be purchased under this item consist of erasers, crayons, pointers, maps, terrestrial globes, periodical holders, linoleum, and such other supplies as may be required for post schools and libraries at military posts.

The services to be procured are subscriptions to newspapers and periodicals, which are supplied to troops on the basis of \$90 per regiment.

Item R. S. 143.—Instruments, purchase and issue of, for the use of officers' schools at the several military posts.

[Estimate fiscal year 1919, \$1,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$500.00	.....	\$500.00	\$500.00	.....	\$500.00	\$1,000.00
Appropriated, fiscal year 1918....	.....	.....	.....	.....	.....	.....	.....
Expended, fiscal year 1917.....	7.47	.....	7.47	500.00	.....	500.00	507.47

REMARKS.

The supplies purchased under this item consist of sketching cases, compasses, protractors, clinometers, notebooks (field), pads, sets of drawing instruments, metallic tape, chains, etc., which are purchased by the Engineer Department and paid for from an allotment made them from this appropriation by the Secretary of War. (See General Orders, No. 89, The Adjutant General's Office, June 22, 1903, modified by General Orders, No. 24, War Department, Feb. 14, 1905.)

The life or period of usefulness of the instruments is approximately 10 to 15 years for the transits and levels and 5 to 6 years for the smaller items.

The increase in amount estimated for the fiscal year 1919 over the cost for the fiscal year 1917 will be required, due to the increase in the strength of the Army. No amount was appropriated under this item for the fiscal year 1918.

Item R. S. 144.—Office furniture, purchase and issue of, for the use of officers' schools at the several military posts.

[Estimate, fiscal year 1919, \$2,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$1,500.00	.....	\$1,500.00	\$500.00	.....	\$500.00	\$2,000.00
Appropriated, fiscal year 1918.....							
Expended, fiscal year 1917.....	1,509.76	.....	1,509.76	500.00	.....	500.00	2,009.76

REMARKS.

The supplies purchased under this item consist of tables, chairs, cases, trestles and boards, and such other articles of office furniture as may be required.

The amount estimated for the fiscal year 1919 is approximately the same as the cost for the fiscal year 1917.

Item R. S. 145.—Stationery, purchase and issue of, for the use of officers' schools at the several military posts.

[No estimate for the fiscal year 1919.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....							
Appropriated, fiscal year 1918.....							
Expended, fiscal year 1917.....	\$627.80	.....	\$627.80				\$627.80

REMARKS.

No estimate is submitted, as requirements under this item are included under Item R. S. 160—Stationery.

Item R. S. 146.—Other authorized articles for the use of officers' schools at the several military posts.

[Estimate fiscal year 1919, \$300.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$200.00	.....	\$200.00	\$100.00	.....	\$100.00	\$300.00
Appropriated, fiscal year 1918.....							
Expended, fiscal year 1917.....	175.64	.....	175.64	100.00	.....	100.00	275.64

REMARKS.

The supplies purchased under this item consist of military maps, textbooks, and such articles not included under Items R. S. 143, 144, and 145, as may be required to meet current requirements.

The amount estimated for the fiscal year 1919 is approximately the same as the cost for the fiscal year 1917.

Item R. S. 147.—Commercial newspapers, subscriptions.

[Estimate fiscal year 1919, \$20,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$20,000.00	.....	\$20,000.00	.....	.....	.....	\$20,000.00
Appropriated, fiscal year 1918.....	500.00	.....	500.00	.....	.....	.....	500.00
Expended, fiscal year, 1917.....	8,405.28	.....	8,405.28	.....	.....	.....	8,405.28

REMARKS.

The services required under this item consist of subscriptions to commercial newspapers, required in connection with the purchase of subsistence and other supplies.

Such commercial newspapers as are required are procured at depots, such as New York, Chicago, St. Louis, San Francisco, etc., for use in connection with the purchase of subsistence supplies and other stores.

The increase in amount estimated for fiscal year 1919 over that appropriated for the fiscal year 1918 is due to the large increase in the Army, necessitating large purchases of all classes of supplies, and these papers are required in order that the various purchasing officers may be advised of market conditions at all times, thereby enabling them to purchase to the best advantage.

Item R. S. 148.—Market reports, etc., subscriptions.

[Estimate fiscal year 1919, \$1,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$1,000.00	.....	\$1,000.00	.....	.....	.....	\$1,000.00
Appropriated, fiscal year 1918.....	500.00	.....	500.00	.....	.....	.....	500.00
Expended, fiscal year 1917.....	303.36	.....	303.36	.....	.....	.....	303.36

REMARKS.

The services required under this item consist of subscriptions to market reports, etc., required in connection with the purchase of subsistence supplies and other stores.

Such market reports, etc., as are required are procured at depots such as New York, Chicago, St. Louis, San Francisco, etc., for use in connection with the purchase of subsistence supplies and other stores.

The increase in this item over the fiscal year 1918 is due to the large increase in the Army, thereby necessitating the purchase of enormous quantities of supplies.

Item R. S. 149.—Tableware for kitchens and mess halls, each and all for enlisted men, including recruits.

[Estimate fiscal year 1919, \$1,560,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$1,551,000.00	.....	\$1,551,000.00	\$9,000.00	.....	\$9,000.00	\$1,560,000.00
Appropriated, fiscal year 1918.....	35,752.00	.....	35,752.00	4,800.00	.....	4,800.00	40,552.00
Expended, fiscal year 1917.....	75,354.72	.....	75,354.72	9,000.00	.....	9,000.00	84,354.72

REMARKS.

The supplies to be purchased under this item consist of articles of tableware, such as gravy boats, bowls, vinegar cruets, dishes, pitchers, saltcellars, etc. (See Special Regulations, No. 40, War Department, 1917, following this item.)

The amount estimated for the fiscal year 1919 is based on the per capita cost for the fiscal year 1917.

Prices at which articles of tableware and kitchen utensils will be charged in case of loss, damage, etc.

Blades, meat-saw, 18-inch ¹	\$0. 22
Boats, gravy	. 27
Bowls	. 20
Bowls, sugar	. 50
Boxes, pepper	. 09
Breakers, salt, for salt cellars ¹	. 02
Cellars, salt	. 10
Choppers, meat ²	5. 25
Cleavers ²	1. 00
Cruets, vinegar	. 21
Cups	. 12
Cutters, meat (sausage machine) ²	4. 79
Cutters, meat, parts for. (Requisitions for meat-cutter parts should in all cases state name of manufacturer and number of machine for which parts are required):	
Cranks ¹	. 35
Crossbars ¹	. 50
Plates—	
$\frac{3}{8}$ -inch holes, with knives ¹	. 50
$\frac{1}{2}$ -inch holes, with knives ¹	. 65
$\frac{3}{4}$ -inch holes, with knives ¹	1. 00
Rings ¹	. 50
Screws—	
Clamp ¹	. 50
Feed ¹	1. 00
Thumb ¹	. 15
Studs ¹	. 25
Dippers ²	. 10
Dishes:	
Pickle	. 26
Vegetable	. 56
Forks:	
Carving ¹	. 41
Meat ¹	. 30
Table	. 27
Graters ¹	. 35
Knives:	
Bread ¹	. 24
Butcher ¹	. 14
Carving ¹	. 46
Table	. 28
Ladles, soup ¹	. 24
Mills, coffee ¹	4. 22
Openers, can ¹	. 10
Pans:	
Dish ¹	. 59
Frying ¹	. 49
Pitchers:	
Sirup	. 93
Water	. 80
Plates:	
Dinner	. 13
Meat	1. 29
Soup	. 13

¹ Expendable under paragraph 3, Bulletin No. 3, War Department, 1914.

² Expendable under paragraph 2, Bulletin No. 3, War Department, 1914.

Pots, mustard.....	\$0. 10
Saucers.....	. 08
Saws, meat ¹.....	. 58
Scales and weights ¹	4. 00
Sieves, flour ¹.....	. 59
Skimmers ¹.....	. 21
Spoons:	
Basting ¹.....	. 10
Mustard ¹.....	. 02
Table.....	. 27
Tea.....	. 15
Steels, carving ¹.....	. 21
Stoppers, vinegar cruet ².....	. 03
Tops, metal:	
Pepper box ².....	. 08
Salt cellar ².....	. 05
Sirup pitcher ².....	. 30
Tumblers.....	. 05

Allowance of china and glassware.

[Based on General Orders No. 7, Headquarters Army, Adjutant General's Office, Jan. 29, 1895; Sec. 11, General Orders, No. 157, Headquarters Army, Adjutant General's Office, Dec. 2, 1901; General Orders, No. 81, War Department, Apr. 25, 1906; Sec. V, Circular No. 3, Headquarters Army, Adjutant General's Office, Mar. 9, 1895; and under the provisions of par. 301, Army Regulations, 1913.]

Articles.	Price, each.	28 men.		65 men.		100 men.	
		Num- ber.	Value	Num- ber.	Value.	Num- ber.	Value.
Boats, gravy.....	\$0. 27	6	\$1. 62	12	\$3. 24	20	\$5. 40
Bowls.....	. 20	28	5. 60	65	13. 00	100	20. 00
Bowls, sugar.....	. 50	6	3. 00	12	6. 00	20	10. 00
Boxes, pepper.....	. 09	6	. 54	12	1. 08	20	1. 80
Cellars, salt.....	. 10	6	. 60	12	1. 20	20	2. 00
Cruets, vinegar.....	. 21	2	. 42	5	1. 05	8	1. 68
Cups.....	. 12	28	3. 36	65	7. 80	100	12. 00
Dishes:							
Pickle.....	. 26	4	1. 04	8	2. 08	13	3. 38
Vegetable.....	. 56	14	7. 84	30	16. 80	50	28. 00
Pitchers:							
Sirup.....	. 93	6	5. 58	12	11. 16	20	18. 60
Water.....	. 80	3	2. 40	6	4. 80	10	8. 00
Plates:							
Dinner.....	. 13	28	3. 64	65	8. 45	100	13. 00
Meat.....	1. 29	3	3. 87	6	7. 74	10	12. 90
Soup.....	. 13	28	3. 64	65	8. 45	100	13. 00
Pots, mustard.....	. 10	6	. 60	12	1. 20	20	2. 00
Saucers.....	. 08	28	2. 24	65	5. 20	100	8. 00
Tumblers.....	. 05	28	1. 40	65	3. 25	100	5. 00
Total values.....			47. 39		102. 50		164. 76
Annual allowance, 20 per cent.....			9. 48		20. 50		32. 95
Quarterly allowance, 5 per cent.....			2. 37		5. 12		8. 24
Quarterly allowance per man.....			. 08		. 08		. 08
Quarterly allowance per man for torpedo planters.....			. 16		. 16		. 16

¹ Expendable under paragraph 2, Bulletin No. 3, War Department, 1914.

² Expendable under paragraph 3, Bulletin No. 3, War Department, 1914.

Allowance of china and glassware—Continued.

Articles.	Price, each.	104 men.		109 men.		120 men.		160 men.	
		Num- ber.	Value.	Num- ber.	Value.	Num- ber.	Value.	Num- ber.	Value.
Boats, gravy.....	\$0.27	21	\$5.67	22	\$5.94	24	\$6.48	32	\$8.64
Bowls.....	.20	104	20.80	109	21.80	120	24.00	160	32.00
Bowls, sugar.....	.50	21	10.50	22	11.00	24	12.00	32	16.00
Boxes, pepper.....	.09	21	1.89	22	1.98	24	2.16	32	2.88
Cellars, salt.....	.10	21	2.10	22	2.20	24	2.40	32	3.20
Cruets, vinegar.....	.21	8	1.68	9	1.89	10	2.10	13	2.73
Cups.....	.12	104	12.48	109	13.08	120	14.40	160	19.20
Dishes:									
Pickle.....	.26	14	3.64	14	3.64	18	4.68	21	5.46
Vegetable.....	.56	52	29.12	54	30.24	60	33.60	80	44.80
Pitchers:									
Syrup.....	.93	21	19.53	22	20.46	24	22.32	32	29.76
Water.....	.80	10	8.00	11	8.80	12	9.60	16	12.80
Plates:									
Dinner.....	.13	104	13.52	109	14.17	120	15.60	160	20.80
Meat.....	1.29	10	12.90	11	14.19	12	15.48	15	19.35
Soup.....	.13	104	13.52	109	14.17	120	15.60	160	20.80
Pots, mustard.....	.10	21	2.10	22	2.20	24	2.40	32	3.20
Saucers.....	.08	104	8.32	109	8.72	120	9.60	160	12.80
Tumblers.....	.05	104	5.20	109	5.45	120	6.00	160	8.00
Total values.....			170.97		179.93		198.42		262.42
Annual allowance, 20 per cent.....			34.20		35.98		39.68		52.48
Quarterly allowance, 5 per cent.....			8.55		9.00		9.92		13.12
Quarterly allowance per man.....			.08		.08		.08		.08
Quarterly allowance per man for tor- pedo planters.....			.16		.16		.16		.16

Interpolations.—For any number of men not given in the foregoing tables, calculate the allowance by simple proportion, taking the allowance of 100 men as a basis. When such proportion results in the fraction of an article, one-half or less is disregarded, more than one-half is regarded as one, except that a final one-half is counted as one in cases where only one article is allowed 30 or 60 men, i. e., skimmers, meat saws, meat choppers or cutters, carving sets, clevers, sieves, and graters.

Item R. S. 150.—Mess furniture for kitchens and mess halls, each and all, for enlisted men, including recruits.

[Estimate fiscal year 1919, \$3000,000.]

	United States.			Philippine Islands.			Grand total.
	Current re- quirements.	New con- struction.	Total.	Current re- quirements.	New con- struction.	Total.	
Estimate.....	\$295,000.00		\$295,000.00	\$5,000.00		\$5,000.00	\$300,000.00
Appropriated, fiscal year 1918.....	15,800.00		15,800.00	2,900.00		2,900.00	18,700.00
Expended, fiscal year 1917.....	13,548.48		13,548.48	3,011.48		3,011.60	16,560.08

REMARKS.

The supplies to be purchased under this item consist of mess tables and stools, kitchen tables kitchen utensils of all kinds, and such other supplies as may be required. The cost of mess tables and stools for the past three years was as follows:

	Fiscal year—		
	1915	1916	1917
Mess tables.....	\$8.05	\$8.78	\$11.57
Mess stools.....	.35	.53½	.56

The amount estimated for the fiscal year 1919 is based on the per capita cost for the fiscal year 1917.

Corrected statement, estimate, fiscal year 1919, R. S. 151, forage:

*Allowance of animals for 1 division.***Horses, riding:**

Division headquarters, including headquarters troops.....	114
2 Infantry brigades.....	316
1 Field Artillery brigade.....	1, 320
1 machine-gun battalion.....	34
1 regiment Engineers.....	52
1 field Signal battalion.....	170
Trains, headquarters and military police.....	301
Ammunition train.....	148
Engineer train.....	5
Sanitary train.....	104
Total riding.....	2, 564

Horses, draft:

1 Field Artillery brigade.....	2, 469
1 regiment Engineers.....	124
1 field Signal battalion.....	18
Ammunition train.....	276
Total draft.....	2, 887

Total horses:

Riding.....	2, 564
Draft.....	2, 887
Total for division.....	5, 451

Mules, pack:

1 regiment Engineers.....	49
1 field Signal battalion.....	22
Trains, headquarters and military police.....	3
Sanitary train.....	8
Total.....	82

Mules, riding:

2 Infantry brigades.....	54
1 Field Artillery brigade.....	22
1 machine-gun battalion.....	14
Total.....	90

Mules, draft:

1 division headquarters, including headquarters troops.....	28
2 Infantry brigades.....	1, 638
1 Field Artillery brigade.....	518
1 machine-gun battalion.....	198
1 regiment Engineers.....	84
1 field Signal battalion.....	42
Trains, headquarters and military police.....	24
Ammunition train.....	184
Engineer train.....	110
Sanitary train.....	232
Total.....	3, 058

Total mules:

Pack.....	82
Riding.....	90
Draft.....	3, 058
Total for division.....	3, 230

Total number animals for one division:

	1 division.	90 divisions.
Horses.....	5, 451	490, 590
Mules.....	3, 230	290, 700
	<hr/>	<hr/>
	8, 681	781, 290
Add 1,000 horses for remounts.....		1, 000
		<hr/>
		782, 290

In the United States the allowance of forage per day is (A. R. 1077): Fourteen pounds of hay per animal, 12 pounds of oats for horses, 9 pounds of oats for mules.

Forage required:

Hay, 782,290 by 14 by 365.....pounds..	3, 997, 501, 900
Oats—	
491,590 by 12 by 365.....do....	2, 153, 164, 200
290,700 by 9 by 365.....do....	954, 949, 500
	<hr/>
	3, 108, 113, 700
	<hr/>
Hay, 3,997,501,900 by 99 cents per hundredweight.....	\$39, 575, 268. 81
Oats, 3,108,113,700 by \$2.71 hundredweight.....	84, 229, 881. 27
	<hr/>
	123, 805, 150. 08
Dog food for Alaska (see sheet 2, R. S. 151).....	8, 000. 00
Philippine Islands (see sheet 3, R. S. 151).....	500, 000. 00
Add for probable increase in cost during fiscal year 1919.....	10, 000, 000. 00
	<hr/>
Grand total.....	134, 313, 150. 08
Add for private mounts for officers, 20,520 pounds.	
Hay, 20,520 by 14 by 365.....pounds..	104, 857, 200
Oats, 20,520 by 12 by 365.....do....	89, 877, 600
	<hr/>
Hay, 104,857,200 pounds, at 99 cents.....	\$1, 038, 086. 28
Oats, 89,877,600 pounds, at \$2.71.....	2, 435, 682. 96
	<hr/>
	3, 473, 769. 24
	<hr/>
Recapitulation:	
Total for Government-owned animals.....	134, 313, 150. 08
Total for private mounts.....	3, 473, 769. 24
	<hr/>
	137, 786, 919. 32

Item R. S. 151.—Forage.

[Estimate fiscal year 1919, \$79,010,000.]

	United States.			Philippine Islands.			Grand total.
	Current re-quirements.	New con-struction.	Total.	Current re-quirements.	New con-struction.	Total.	
Estimate.....	\$78, 510, 000. 00		\$78, 510, 000. 00	\$500, 000. 00		\$500, 000. 00	\$79, 010, 000. 00
Appropriated fis-cal year 1918....	6, 171, 358. 29		6, 171, 358. 29	538, 641. 71		538, 641. 71	6, 710, 000. 00
Expended fiscal year 1917.....	9, 639, 429. 64		9, 639, 429. 64	501, 373. 79		501, 373. 79	10, 140, 803. 43

REMARKS.

The average cost of forage for the fiscal year 1917 was \$0.6809 per hundredweight for hay and \$1.7303 per hundredweight for oats, which is approximately \$0.0322 per hundredweight less for hay and \$0.1001 per hundredweight less for oats than the prices paid during the fiscal year 1916.

Based upon prices being paid under 1918 contracts at 21 Army posts in the United States the average cost is approximately \$2.71 per hundredweight for oats and \$0.99 per hundredweight for hay.

The average cost at prices quoted above for the fiscal year 1918 will make the forage required for the authorized allowance of animals in the Army, other than the Philippine Islands, at the strength estimated for the fiscal year 1919, cost approximately as shown below:

(In the United States the allowance of forage per day is 14 pounds of hay per animal, 12 pounds of oats for horses, and 9 pounds of oats for mules). (Par. 1077, A. R.)

Horses:

Cavalry.....	37, 100
Artillery.....	162, 135
Riding.....	43, 920
Draft.....	18, 810
Private.....	20, 520
Remounts.....	3, 000

Total..... 285, 485

Mules:

Draft.....	140, 400
Pack.....	3, 735
Riding.....	4, 050

Total..... 148, 185

Grand total..... 433, 670
Pounds.

Hay, 433,670 by 14 by 365..... 2, 216, 053, 700

Oats:

285,485 by 12 by 365.....	1, 250, 424, 300
148,185 by 9 by 365.....	467, 787, 725
	1, 718, 212, 025

Hay, 2,216,053,700 by \$0.99 per hundredweight..... \$21, 938, 931. 66
Oats, 1,718,212,025 by \$2.71 per hundredweight..... 46, 563, 545. 87

Total..... 68, 502, 477. 53
Dog food..... 8, 000. 00

Total..... 68, 510, 477. 53

The average cost of forage per animal per day, taking the average prices under contracts for the fiscal year 1918, is \$0.429.

The sum of \$8,000 has been added to this item to cover cost of dog food for dogs used in Alaska. This is \$250 less than amount appropriated for this purpose fiscal year 1918, but is approximately the cost for the fiscal year 1917. There are 147 dogs used on the trails in Alaska, making the cost of dog food per dog \$54.42 per annum.

Philippine Islands: The following are the average prices per hundredweight paid for forage for the Philippine Islands under contracts for the fiscal year 1917:

Oats.....	\$1. 6061
Hay.....	. 901

The total cost of forage purchased for the Philippine Islands for the fiscal year 1917, was \$451,300. This does not include native grass which is purchased in the Philippine Islands.

All shipments of forage to the Philippine Islands are made from the Pacific coast.

Forage required for the Philippine Islands during the first quarter, fiscal year 1918, has been contracted for. The prices paid under these awards were \$1.32 per hundredweight for hay, \$2.745 per hundredweight for oats and \$2.15 per hundredweight for bran. These prices are \$1.1389 for oats and \$0.419 for hay more than was paid during the fiscal year 1917. As these prices are the latest available they have been used as the basis for this estimate.

The cost of supplying forage for the Philippine Islands from the United States during the fiscal year 1919, based on these prices, will be as follows:

	Pounds.
Hay, 5,605 animals by 9½ by 365.....	19, 094, 245
Oats:	
3,162 horses by 12 by 365.....	13, 849, 560
2,443 mules by 9 by 365.....	8, 025, 255
Total.....	21, 874, 815
Hay, 19,094,245 by \$1.32.....	\$252, 044. 03
Oats, 21,874,815 by \$2.745.....	600, 463. 67
Native grass.....	68, 000. 00
Total.....	920, 507. 70

Estimate is made for but \$500,000 under this item, which is the amount called for in estimate submitted by the department authorities, Philippine department.

Increase of animals-- United States.

	1918	1919	Increase.	Decrease.
Horses:				
Cavalry.....	14, 810	37, 100	22, 290	
Artillery.....	4, 994	162, 135	157, 141	
Riding.....	3, 446	43, 920	40, 474	
Draft.....	267	18, 810	18, 543	
Private.....	2, 000	20, 520	18, 520	
Remounts.....	2, 200	3, 000	800	
Total.....	27, 717	285, 485	257, 768	
Mules:				
Draft.....	9, 502	140, 400	130, 898	
Pack.....	3, 188	3, 735	547	
Riding.....	808	4, 050	3, 242	
Total.....	13, 498	148, 185	134, 687	
Grand total.....	41, 215	433, 670	392, 455	

Increase is due to the fact that the allowance of animals for fiscal year 1919 is based on a strength of 100,000 commissioned officers and 1,612,245 enlisted men, or substantially 45 Infantry divisions, whereas figures for fiscal year 1918 were based on a strength of 168,999 officers and men.

Based on the increase in prices for the fiscal year 1918 over prices for the fiscal year 1917, it is estimated that approximately \$10,000,000 will be required to cover the probable increase in prices for the fiscal year 1919, which amount has been included in the estimate under this item.

(Corrected statement, estimate 1919, item R. S. 152, salt for public animals: Total number animals, 782,290. (See statement under item 151, forage.)

Allowance, 0.8 ounce per day for each animal.

782,290×0.8÷16=39,114 pounds.
39,114×365=14,276,610 pounds.
14,276,610×\$0.01 per pound=\$142,766.10.

Item R. S. 152.—Salt.

[Estimate fiscal year 1919, \$78,000.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New construc-tion.	Total.	Current require-ments.	New construc-tion.	Total.	
Estimate.....	\$76, 725. 00		\$76, 725. 00	\$1, 275. 00		\$1, 275. 00	\$78, 000. 00
Appropriated, fiscal year 1918.....	5, 553. 50		5, 553. 50	1, 316. 00		1, 316. 00	6, 869. 50
Expended, fiscal year 1917.....	3, 744. 37		3, 744. 37	1, 283. 00		1, 283. 00	5, 027. 37

REMARKS.

This item covers the purchase of salt for animals, necessary to meet current requirements. The allowance of rock salt for each animal per day is 0.8 ounce. (See par. 1215 A. R.)

Estimate for the fiscal year 1919 is based on the following: 433,670 animals×0.8 ounce per day×365 days×\$0.01 per pound, \$78,869.20.

Corrected statement, estimate 1919, item 153, vinegar for public animals: Total number animals, 782,290. (See statement under item 151, forage.)

Allowance 0.1 gill per day for each animal. (A. R. 1215.)

$782,290 \times 0.1 \times 365 = 28,553,585$ gills.

$28,553,585 \div 32$ (gills in 1 gallon) = 892,300 gallons.

$892,300 \times 20$ cents (price per gallon) = \$178.460.

Item R. S. 153. -- Vinegar.

[Estimate fiscal year 1919, \$98,915.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New con-struction.	Total.	Current require-ments.	New con-struction.	Total.	
Estimate.....	\$97,815.00		\$97,815.00	\$1,100.00		\$1,100.00	\$98,915.00
Appropriated fiscal year 1918.....	3,285.00		3,285.00	1,100.00		1,100.00	4,385.00
Expended fiscal year 1917.....	744.87		744.87	1,089.75		1,089.75	1,834.62

REMARKS.

This item covers the purchase of vinegar for animals, necessary to meet current requirements. The allowance of vinegar for each animal per day is 0.1 gill. (See par. 1215, A. R.)

Estimate for the fiscal year 1919 is based on the following: 433,670 animals ×0.1 gill per day × 365 days × \$0.20 per gallon, \$98,915.

Corrected statement, estimate fiscal year 1919, item R. S. 154, bedding for animals: Total number of animals, 782,290. (See statement under item 151, forage.)

Allowance, 1,200 pounds per annum.

$782,290 \times 1,200 = 938,748,000$.

$938,748,000 \times 60$ cents per hundredweight = \$5,632,488.

Item R. S. 154. -- Bedding.

[Estimate fiscal year 1919, \$3,122,424.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New construction.	Total.	Current require-ments.	New construction.	Total.	
Estimate.....	\$3,105,424.00		\$3,105,424.00	\$17,000.00		\$17,000.00	\$3,122,424.00
Appropriated fiscal year 1918.....	190,000.00		190,000.00	18,100.00		18,100.00	208,100.00
Expended fiscal year 1917.....	170,827.77		170,827.77	17,365.00		17,365.00	188,192.77

REMARKS.

Under this item is purchased bedding for animals. The regulation allowance of bedding (see par. 1085, A. R.) is 1,200 pounds per animal per annum.

The cost of bedding for the number of animals estimated for the fiscal year 1919 would be as follows: 433,670 animals×1,200 pounds per annum×\$0.60 per hundred-weight, \$3,122,424.

Item R. S. 155. *Seeds required for the raising of forage at remount depots and on military reservations in the Hawaiian and Philippine Islands.*

[Estimate fiscal year 1919, \$5,000.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New construc-tion.	Total.	Current require-ments.	New construc-tion.	Total.	
Estimate.....	\$5,000.00	.....	\$5,000.00	.....	.....	.....	\$5,000.00
Appropriated fiscal year 1918....	1,000.00	.....	1,000.00	.....	.....	.....	1,000.00
Expended fiscal year 1917.....	2,301.44	.....	2,301.44	.....	.....	.....	2,301.44

REMARKS.

The supplies to be purchased under this item consist of such seeds as may be required for raising forage at the various remount depots.

The following are the present established remount depots: Fort Reno, Okla., Fort Keogh, Mont., Front Royal, Va.

The increase in the amount estimated for the fiscal year 1919 over the cost for the fiscal year 1917, it is believed will be required due to the establishment of a number of auxiliary remount depots.

The total of the items R. S. 155, 156, 157, and 158, of this estimate, covering amounts required for the raising of forage at remount depots, is \$24,000.

The estimated value of forage produced at the remount depots for the fiscal year 1917 was as follows:

	Quantity.	Estimated value.
Fort Keogh, Mont.:		
Oats.....	pounds..... 400,000	\$10,000.00
Hay (alfalfa).....	do..... 1,000,000	10,000.00
Hay (timothy).....	do..... 150,000	1,650.00
Straw.....	do..... 400,000	2,000.00
Front Royal, Va.:		
Oats.....	do..... 80,000	800.00
Hay (alfalfa).....	do..... 40,000	400.00
Hay (other hay, including clover, orchard, and blue grass).....	do..... 30,000	225.00
Corn.....	barrels..... 295	1,475.00
Corn fodder.....	bundles..... 3,000	180.00
Fort Reno, Okla.:		
Hay (alfalfa).....	tons..... 1,000	18,000.00
Hay (prairie).....	do..... 150	1,500.00
Hay (Sudan).....	do..... 40	400.00
Hay (baled).....	do..... 62	930.00
Oats.....	bushels..... 1,000	700.00
Seed (alfalfa).....	do..... 250	2,500.00
Seed (Feterita).....	do..... 95	147.50
Seed (Sudan).....	pounds..... 1,200	480.00
Feterita.....	tons..... 600	10,800.00
Total estimated value.....		62,182.50

Item R. S. 156.- *Implements required for the raising of forage at remount depots and on military reservations in the Hawaiian and Philippine Islands.*

[Estimate fiscal year 1919, \$10,000.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New construc-tion.	Total.	Current require-ments.	New construc-tion.	Total.	
Estimate.....	\$9,725.00	.....	\$9,725.00	\$275.00	.....	\$275.00	\$10,000.00
Appropriated, fiscal year 1918.....	5,000.00	.....	5,000.00	200.00	.....	200.00	5,200.00
Expended, fiscal year 1917....	4,235.72	.....	4,235.72	603.00	.....	603.00	4,838.72

REMARKS.

The supplies to be purchased under this item consist of plows, harrows, threshing machines, rakes, hoes, and other farming implements required for raising forage at remount depots, and in the Hawaiian and Philippine Islands.

The increase in the amount estimated for the fiscal year 1919 over the cost for the fiscal year 1917, it is believed will be required, due to the establishment of a number of auxiliary remount depots.

Item R. S. 157.—Labor required for the raising of forage at remount depots and on military reservations in the Hawaiian and Philippine Islands.

[Estimate fiscal year 1919, \$5,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$5,000.00	.....	\$5,000.00	.....	.....	.....	\$5,000.00
Appropriated fiscal year 1918.....	500.00	.....	500.00	.....	.....	.....	500.00
Expended fiscal year 1917..	4,438.88	.....	4,438.88	.....	.....	.....	4,438.88

REMARKS.

The services required under this item consist of the hire of such labor as may be required in addition to the regular authorized labor at remount depots for raising forage.

The amount estimated for the fiscal year 1919 is approximately the same as the cost for the fiscal year 1917.

Item R. S. 158.—Expenses incident (other expenses) required for the raising of forage at remount depots and on military reservations in the Hawaiian and Philippine Islands.

[Estimate fiscal year 1919, \$4,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$4,000.00	.....	\$4,000.00	.....	.....	.....	\$4,000.00
Appropriated fiscal year 1918.....	750.00	.....	750.00	.....	.....	.....	750.00
Expended fiscal year 1917..	3,759.40	.....	3,759.40	.....	.....	.....	3,759.40

REMARKS.

Expenditures under this item consist of purchase of supplies or engagement of services in connection with the raising of forage at remount depots, not included under items 155, 156, and 157, ante.

The amount estimated for the fiscal year 1919 is approximately the same as the cost for the fiscal year 1917.

Item R. S. 159.—*Straw for soldiers' bedding.*

[Estimate fiscal year 1919, \$3,482,000.]

	United States.			Philippine Islands.			Grand total.
	Current re-quirements.	New construc-tion.	Total.	Current re-quirements.	New construc-tion.	Total.	
Estimate.....	\$3,481,500.00	.....	\$3,481,500.00	\$500.00	.....	\$500.00	\$3,482,000.00
Appropriated, fiscal year 1918.....	7,000.00	.....	7,000.00	500.00	.....	500.00	7,500.00
Expended, fiscal year 1917.....	10,510.44	.....	10,510.44	500.00	.....	500.00	11,010.44

REMARKS.

Under this item is purchased straw for soldiers' bedding. The issue of straw for this purpose is authorized by paragraph 1084, Army Regulations, as follows:
"Except for troops serving in the Tropics, when mattresses are not supplied, a bed sack and 30 pounds of straw a month for bedding will be furnished to each enlisted man in barracks or in a permanent or a maneuver camp, and to each prisoner in a guardhouse; and a bed sack and such quantity of straw as the chief medical officer may certify to be necessary to each enlisted man in a field hospital. In the field, in cases not covered above, such quantity of straw or hay for the bedding of troops is authorized as the commanding officer, after advising with the medical officer of the command, may deem necessary to preserve the health of the troops. So far as practicable, an iron bunk will be furnished to each prisoner in a post guardhouse and prison room."
Based upon the number of troops estimated for the fiscal year 1919, the amount required will be as follows: 1,612,245 men×30 pounds per month×12 months×\$0.60 per hundred pounds=\$3,482,449.20.

Item R. S. 160.—*Stationery.*

[Estimate fiscal year 1919, \$8,782,000.]

	United States.			Philippine Islands.			Grand total.
	Current re-quirements.	New construc-tion.	Total.	Current re-quirements.	New construc-tion.	Total.	
Estimate.....	\$8,762,000.00	.....	\$8,762,000.00	\$20,000.00	.....	\$20,000.00	\$8,782,000.00
Appropriated, fiscal year 1918...	100,230.00	.....	100,230.00	20,000.00	.....	20,000.00	120,230.00
Expended, fiscal year 1917.....	452,932.52	.....	452,932.52	20,769.00	.....	20,769.00	473,701.52

REMARKS.

The supplies to be purchased under this item consist of paper, pencils, penholders, pens, ink, desk baskets, shears, inkstands, blotters, rulers, and such other supplies as may be required. The principal organizations for which stationery is supplied by the Quartermaster Corps, including The Adjutant General's Department in the field, are department headquarters, artillery district headquarters, post headquarters, recruit depots, quartermaster depots and offices, constructing quartermasters, company orderly rooms, quartermaster sergeants, as well as courts, board, special reports, military attachés, officers, retired officers, etc.
The amount estimated for the fiscal year 1919 is based on the per capita cost for the fiscal year 1917.

Item R. S. 161.—Typewriters, purchase and exchange of.

[Estimate fiscal year 1919, \$3,000,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$2,996,050.00	.....	\$2,996,050.00	\$3,950.00	.....	\$3,950.00	\$3,000,000.00
Appropriated, fiscal year 1918.....	18,000.00	.....	18,000.00	3,960.00	.....	3,960.00	21,960.00
Expended, fiscal year 1917.....	296,758.80	.....	296,758.80	3,950.00	.....	3,950.00	300,708.80

REMARKS.

Under this item are purchased typewriting machines and parts for repair of such machines. The department is authorized by law to exchange old machines as part payment for new ones. This method has been found to result in considerable saving in the purchase of machines.

During the fiscal year 1917, 4,438 typewriting machines of all kinds and sizes were purchased. The average cost of these machines was \$69.25 each; the average allowance of old machines exchanged as part payment for new machines was \$15.83.

The unusually large number of machines purchased during the fiscal year 1917 was due to the great increase in clerical work at department headquarters, depots, and posts, and for equipment of additional troops.

The amount required for the fiscal year 1919, based on the per capita cost for the fiscal year 1917, would be approximately \$6,000,000, but it is believed that the amount estimated for will be sufficient.

Item R. S. 161a.—Typewriters, repair of.

[Estimate fiscal year 1919, \$62,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$61,430.00	.....	\$61,430.00	\$570.00	.....	\$570.00	\$62,000.00
Appropriated, fiscal year 1918.....	2,000.00	.....	2,000.00	570.00	.....	570.00	2,570.00
Expended, fiscal year 1917.....	2,806.08	.....	2,806.08	570.00	.....	570.00	3,376.08

REMARKS.

The amount estimated for is based on the per capita cost for the fiscal year 1917.

Item R. S.—Blank books for the Quartermaster Corps.

[Estimate fiscal year 1919, \$10,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$9,200.00	.....	\$9,200.00	\$800.00	.....	\$800.00	\$10,000.00
Appropriated, fiscal year 1918....	100.00	.....	100.00	800.00	.....	800.00	900.00
Expended, fiscal year 1917.....	1,285.20	.....	1,285.20	800.00	.....	800.00	2,085.20

REMARKS.

Under this item are purchased such blank books as may be necessary for use of the Quartermaster Corps.

The amount required for the fiscal year 1919, based on the per capita cost for the fiscal year 1917, would be approximately \$38,000, but it is believed that the amount estimated for will be sufficient.

Item R. S. 163.—Blank forms for the Quartermaster Corps.

[Estimate fiscal year 1919, \$250,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$247,500.00	.....	\$247,500.00	\$2,500.00	.....	\$2,500.00	\$250,000.00
Appropriated fiscal year 1918.....	29,600.00	.....	29,600.00	2,900.00	.....	2,900.00	32,500.00
Expended fiscal year 1917.....	1,216.07	.....	1,216.07	2,510.00	.....	2,510.00	3,726.07

REMARKS.

The services to be procured under this item consist of the printing of such blank forms as are required for the Quartermaster Corps.

The large increase in amount estimated for the fiscal year 1919 over the amount appropriated for the fiscal year 1918 will be required, due to the large increase in the Army, thereby necessitating a great increase in the number of forms to be supplied.

Item R. S. 164.—Certificates for discharged soldiers.

[Estimate fiscal year 1919, \$10,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$9,900.00	.....	\$9,900.00	\$100.00	.....	\$100.00	\$10,000.00
Appropriated fiscal year 1918.....	1,000.00	.....	1,000.00	100.00	.....	100.00	1,100.00
Expended fiscal year 1917.....	86.99	.....	86.99	100.00	.....	100.00	186.99

REMARKS.

The services to be procured under this item consist of the printing of certificates of discharged soldiers.

The increase in amount estimated for the fiscal year 1919 over the amount appropriated for the fiscal year 1918 will be required due to the large increase in the strength of the Army.

Item R. S. 165.—Printing department orders and reports.

[Estimate fiscal year 1919, \$175,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$150,000.00	.....	\$150,000.00	\$25,000.00	.....	\$25,000.00	\$175,000.00
Appropriated fiscal year 1918.....	78,500.00	.....	78,500.00	26,500.00	.....	26,500.00	105,000.00
Expended fiscal year 1917.....	33,009.73	.....	33,009.73	25,100.00	.....	25,100.00	58,109.73

REMARKS.

The supplies purchased under this item consist of such printing materials as presses, type, rollers, etc., as may be required for use at headquarters, posts, and depots where printing presses are operated.

The services consist of the hire of such labor as may be required in addition to the services of enlisted men detailed for this purpose.

The amount required for the fiscal year 1919, based on the per capita cost for the fiscal year 1917, would be approximately \$1,000,000, but it is believed that the amount estimated for will be sufficient.

NOTE.—The law requires that printing be done at the Government Printing Office or by contract after due notice and competition, except in such cases where it is impracticable to have the necessary printing done by contract, the same is done, with the approval of the Secretary of War, by purchase of material and hire of necessary labor for the purpose.

The period of contracts does not extend beyond the end of the fiscal year in which made.

REGULAR SUPPLIES, QUARTERMASTER CORPS.

(Supplemental estimate.)

Original estimate.....	\$203, 031, 811. 00
Supplemental estimate.....	29, 058, 914. 54

Fiscal year 1919.—Appropriation: "Regular supplies."

ITEM 114A.—FIELD RANGES.

No. 1 field ranges.

3,000,000 men÷3,600 men per regiment=833 regiments.

833 regiments×12 organizations=2 No. 1 ranges per organization.

833 regiments×3 organizations=1 No. 1 range per organization.

Total number ranges per regiment=27.

833 regiments×27 No. 1 ranges per regiment, 22,491.

Estimated life of range 4 months=3 per year each organization.

Total number ranges for 1 year, 67,473.

Average price complete, \$34.70.

Average price without equipment, \$26.365.

Estimated equipment lasts 1 year; range 4 months.

Therefore one range complete is required at \$34.70 and two ranges without equipment at \$26.365.

22,491 ranges complete, at \$34.70.....	\$780, 437. 70
44,982 ranges without equipment, at \$26.37.....	1, 186, 175. 34

Total required for 3,000,000 men.....	1, 966, 613. 04
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No. 2 field ranges.

3,000,000 men=833 regiments.

4 No. 2 ranges per regiment×833.....	3, 332
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Brigade headquarters, 417, one each.....	417
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Division headquarters, 208, one each.....	208
---	-----

Miscellaneous truck companies, wagon companies, etc.....	4, 000
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Total.....	7, 957
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Estimates life of range 4 months=3 per year each organization.

Total number ranges for 1 year, 23,871.

23,871 No. 2 ranges, at \$26.50.....	\$632, 581. 50
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Total required for No. 1 and No. 2 ranges.....	2, 599, 194. 54
--	-----------------

Deduct for 1,612,000 men already estimated for.....	500, 000. 00
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Total amount required in this estimate.....	2, 099, 194. 54
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1919 supplemental, 1,014.

Corrected statement, field ranges, fiscal year 1919, supplemental estimate.

Total officers and men, 1,487,755.

Ninety per cent to use field range No. 1, 1,338,980.

Ten per cent to use field range No. 2, 148,775.

No. 1 range.

Capacity, 150 men.

Required for 1,338,980 men.....	8,927
Life of range, 3 months (4 per year).....	4

Number required for 1 year.....	35,708
---------------------------------	--------

Life of equipment, 6 months.

Required:

17,854 complete with equipment, at \$45.52.....	\$812,714.08
17,854 without equipment, at \$27.76.....	495,627.04

35,708.....	1,308,341.12
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No. 2 range.

Cooking capacity, 55 men.

Required for 148,775 men.....	2,705
Life of field range, 3 months (4 per year).....	4

Number required for 1 year.....	10,820
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Life of equipment, 6 months.

Required:

5,410 complete with equipment, at \$23.84.....	\$128,974.40
5,410 without equipment, at \$18.70.....	101,167.00

10,820.....	230,141.40
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Recapitulation.

35,708 field ranges, No. 1.....	\$1,308,341.12
10,820 field ranges, No. 2.....	230,141.40

1,538,482.52

1919 original, 1,006.

Consolidated statement of corrected statements of field ranges required during fiscal year 1919.

Total number officers and men:

Original estimate.....	1,712,245
Supplemental estimate.....	1,487,755

Total.....	3,200,000
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90 per cent to use field range No. 1:

Original estimate.....	1,541,020
Supplemental estimate.....	1,338,980

Total.....	2,880,000
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10 per cent to use field range No. 2:

Original estimate.....	171,225
Supplemental estimate.....	148,775

Total.....	320,000
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No. 1 range.

Required for 2,880,000 men.....	19,201
Life of range, 3 months (4 per year).....	4

76,804

Life of equipment, 6 months.

Required:

38,402 complete with equipment, at \$45.52.....	\$1,748,059.04
38,402 without equipment, at \$27.76.....	1,066,039.52

76,804.....	2,814,098.56
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No. 2 range.

Required for 320,000 men.....	5,813
Life of range, 3 months (4 per year).....	4
	<hr/>
	23,252

Life of equipment, 6 months.

Required:

11,626 complete with equipment, at \$23.84.....	\$277,163.84
11,626 without equipment, at \$18.70.....	217,406.20
	<hr/>
23,252.....	494,570.04

Recapitulation.

76,804 field ranges No. 1.....	\$2,814,098.56
23,252 field ranges No. 2.....	494,570.04
	<hr/>
	3,308,668.60

Item 117.- Appliances.

For purchase of rolling kitchens.

No amount was included in the original estimate for purchase of rolling kitchens, as it was believed that the number provided during the current fiscal year would be sufficient for equipment of 1,612,000 men.

Due to the fact, however, that all rolling kitchens provided during the current fiscal year will require replacement during the fiscal year 1919, and as it requires six months or more to procure, estimate is submitted below for the full number required for equipment of 3,000,000 men.

Average capacity of rolling kitchens, 200 men.

3,000,000 divided by 200 equals 15,000 rolling kitchens.

Average cost of kitchens, \$1,000 each.

Amount of estimates, 15,000 multiplied by \$1,000 equals \$15,000,000.

Item 126.- Bake ovens.

For purchase of field bakeries.

3,000,000 men divided by 25,000 men—average strength of divisions 120 companies.

104 companies, to which should be added one-third for upkeep, total 35,160 companies.

120 companies multiplied by 15 ovens per company to be replaced, total ovens, 1,800.

Average price per bakery, \$13,026.

Average price per oven, \$264.20.

160 companies, at \$13,026.....	\$2,084,160
1,800 ovens, at \$264.20.....	475,560
	<hr/>

Total required for field bakeries..... 2,559,720

No amount was included in the original estimate for purchase of field bakeries, as it was believed that the number provided during the current fiscal year would be sufficient for equipment of 1,612,000 men.

Due to the fact, however, that all field bakeries provided during the current fiscal year will probably require replacement during the fiscal year 1919, and as it requires six months or more to procure, estimate is submitted herewith for the full number required for equipment of 3,000,000 men. Amount of estimate, \$2,559,720.

Item 127.- Ice machines.

For the purchase and installation of machinery for ice and refrigerating plants for 40 cantonments in France, at an approximate cost of \$70,000 each; total.....

\$2,800,000

For the purchase and installation of one additional large ice and refrigerating plant similar to the one now being installed in France, which will take care of approximately 1,000,000 men.....

2,000,000

Total..... 4,800,000

Deduct for 1,612,000 men already estimated for..... 1,400,000

Amount required..... 3,400,000

Item 133.—Laundries.

For the purchase of machinery and equipment for laundry plants; estimated as required for 3,000,000 men. 60 laundry plants, at a cost of \$200,000 each; total.....		\$12,000,000
Deduct for 1,612,000 men already estimated for.....		6,000,000
Total required.....		6,000,000

Recapitulation.

Item 114a, field ranges.....	\$2,099,194.54
Item 117, appliances (rolling kitchens).....	15,000,000.00
Item 126, bake ovens (field bakeries).....	2,559,720.00
Item 127, ice machines.....	3,400,000.00
Item 133, laundries.....	6,000,000.00
Total.....	29,058,914.54

Capt. DALY. There is an item there about which I would like to make a statement. In the item of forage, under this appropriation, there is an error of \$29,276,000. We have asked that that estimate as submitted be increased by \$29,276,000. There was an error of that amount, and that is due this—

The CHAIRMAN. That ought to be added?

Capt. DALY. Yes, sir: \$29,276,000. That is item 151, under regular supplies.

That is due to the fact that when the estimate was prepared in the division charged with its preparation, for a basis upon which to submit a tentative estimate to the Secretary of War for his consideration, they did not include the proper number of animals. After the detailed notes were made up, which we now have, reached the estimate division, we checked over that and found that there was an error in the amount for forage, but it was too late to add it to the estimate.

The CHAIRMAN. That is because they did not figure on a sufficient number of animals?

Capt. DALY. The number of animals they figured on was less than the number of animals they are going to have.

The CHAIRMAN. What was the difference in the number of animals?

Capt. DALY. About 300,000.

The CHAIRMAN. How did that happen?

Capt. DALY. It is a clerical error, I imagine, sir.

The CHAIRMAN. What is the annual rate you pay for animals, for forage—the base rate?

Capt. DALY. We base the estimate on the average cost of grain and hay, based on the latest contracts that are available.

Mr. GREENE. About what figures does that range between from year to year?

Capt. DALY. We can get those figures and put that in the record.

Mr. SHALLENBERGER. The price of forage is enormously higher than ever before—fully 100 per cent higher. Have you taken that into consideration in making the estimates for next year?

Capt. DALY. It is based on a per capita cost per animal per day, and that has jumped from 26 to 42 cents a day. The per capita cost prior to this recent disturbance ran along about 26 or 28 cents.

Mr. GREENE. Per day?

Capt. DALY. Per day. Now it is 42.9 cents per animal per day.

Mr. SHALLENBERGER. This discrepancy might have occurred in failing to take that into consideration.

Capt. DALY. It is due to the fact that the people who figured the estimate did not include the proper number of animals, I think, through an oversight, rather than a lack of knowledge.

Mr. SHALLENBERGER. Does the forage item include the grain for the horses?

Capt. DALY. It includes the grain, the hay, and the straw.

Mr. SHALLENBERGER. Everything the horse eats?

Capt. DALY. Yes, sir.

Mr. KAHN. I understand the provisos following the amounts are the law now.

Gen. SHARPE. Yes, sir.

Capt. DALY. The last proviso on page 34, "*And provided further, That the Secretary of War is hereby authorized to use the appropriations of the Quartermaster Corps to reimburse the Apache Indian prisoners of war in the sum of \$4,590 for fence constructed by them around the Fort Sill Military Reservation.*" is a new item.

Mr. KAHN. We had that up before, however. Suppose you explain that provision.

Gen. SHARPE. I have a note on that submitted by the General Staff, through the Chief of Staff.

The CHAIRMAN. Do I understand that this appropriation is to reimburse the Indian prisoners of war confined there for some labor they were purported to have done?

Gen. SHARPE. For building a fence, and for the material provided in the building of the fence.

The CHAIRMAN. The Indian prisoners of war furnished the labor and material?

Gen. SHARPE. It was furnished out of their funds.

Mr. SHALLENBERGER. Who is going to get this money?

Capt. DALY. The Indian prisoners of war.

Mr. SHALLENBERGER. Somebody who has an assignment of the claim of the Indian prisoners of war?

The CHAIRMAN. I want to know what is the basis of the claim. If they were prisoners of war and they were made to work there. I do not see why they should be paid.

Mr. ANTHONY. Did the Government furnish the material?

Capt. DALY. It was furnished, apparently, out of a fund appropriated by the Government for the Apache Indian prisoners of war.

Mr. GREENE. Does this relate to the fort?

Gen. SHARPE. It relates to the reservation there now, and it did relate to that when they built it.

Mr. SHALLENBERGER. What was the purpose of the fence, for pasture?

Gen. SHARPE. Yes, sir.

Mr. SHALLENBERGER. That was used by range men to range cattle upon, was it?

Capt. DALY. We have had a reinount station there.

Mr. SHALLENBERGER. When it was first built what was it built for?

Capt. DALY. I do not know.

Mr. KAHN. Does that fence entirely encompass the reservation?

Gen. SHARPE. Yes, sir.

COAL, COOPERATION BILL, 1919.

Enclosure No. 1

		Article		June, 1914.	November, 1917.
Cost (1914)	Standard (1917)				
017 44	024 15	Smoking gloves.....		\$1.20	\$2.15
15 30	19 07	Leggings.....		.63	1.15
6 96	10 51	Gray flannel shirt.....		1.68	2.10
40 71	51 15	Gymnasium shoes.....		2.00	2.50
11 14	15 55	Uniform calf shoes.....		4.17	5.00
9 18	6 21	Comfortable.....		1.35	1.30
15 30	12 00	Mattress.....		10.00	12.00
4 10	1 35	Pillow.....		2.45	2.50
1 31	1 47	Pillowcase.....		.17	.24
21	40	Sheet.....		.45	.65
40	60	Drawing instruments.....		13.25	14.75

All articles except uniforms will be higher when the market is up again.

The main point of difference was that they were allowed 30 cents per week by law and that was in the Military Academy bill at 25.

It was about 18 cents at that time. Then it was raised when the ration got over 20 cents. Now the ration is 21.

They say there is a tendency to increase the ration.

Why is the cooperation bill not passed?

It is not passed because it is not popular.

It is not popular because it is not understood.

It is not understood because it is not explained.

It is not explained because it is not simplified.

It is not simplified because it is not made plain.

It is not made plain because it is not made clear.

It is not made clear because it is not made simple.

It is not made simple because it is not made easy.

It is not made easy because it is not made pleasant.

It is not made pleasant because it is not made agreeable.

It is not made agreeable because it is not made acceptable.

It is not made acceptable because it is not made desirable.

It is not made desirable because it is not made useful.

It is not made useful because it is not made necessary.

It is not made necessary because it is not made essential.

It is not made essential because it is not made indispensable.

It is not made indispensable because it is not made irreplaceable.

INCIDENTAL EXPENSES.

The CHAIRMAN. The next item is, "Incidental expenses, Quartermaster Corps," and the amount of the estimate is \$10,457,814.59. You got under that item \$19,000,000 at the last session of Congress, and under that item this year you are asking for \$10,000,000. Is that decrease accounted for largely on account of the initial cost of the articles, which you will not have to buy next year?

Capt. DALY. That is one of the reasons. The additional reason is that for this fiscal year, during the early part of the fiscal year, and up to now, we have had to hire a great many civilians. Those are now being replaced by enlisted men and that reduces the appropriation.

The CHAIRMAN. For what purpose are they employed?

Capt. DALY. As laborers and mechanics. It is also due to the fact that we were required to purchase an initial stock of various supplies, and the appropriation asked for the fiscal year 1919, contemplates merely replenishment.

Gen. SHARPE. I will submit a table showing the amounts under the various items.

The CHAIRMAN. Under each item?

Gen. Sharpe. It gives an explanation of each item.

The CHAIRMAN. I also would like to have you put in the record a statement showing how much you have spent of this appropriation last year, and what you have contracted for up to date. Is there anything special in the item you submit, other than the detailed statement?

Gen. SHARPE. No, sir; the statement shows it all, with the explanation under each item.

Mr. McKENZIE. You buy all the supplies for the Army, both at home and abroad, as I understand it, through your department?

Gen. SHARPE. Yes, sir.

Mr. McKENZIE. In the purchase of articles, have you been purchasing sawmills for use in France.

Gen. SHARPE. Those have been all bought by the Engineer Department.

Mr. McKENZIE. Does it go through your office at all?

Gen. SHARPE. No, sir. It is entirely under the Engineer Department and comes out of the engineer funds. The regulations provided that the Quartermaster Corps should provide for all construction work, and the operation of roads and construction and operation of steamboats, but they say further that in the zone of advance the Engineer Department will have charge of all of those activities. That would make a complication and might lead to a duplication of work, and so Gen. Black and I talked the matter over, and I wrote a letter to the Secretary of War saying that I thought all of France should be considered as the zone of the advance, so that we would not be duplicating any purchases or personnel, so that they now have all construction work and the operation of the roads, and the repair of all roads in France.

Mr. McKENZIE. We can get that information from Gen. Black?

Gen. SHARPE. Yes, sir; he will have that as a part of his appropriation.

Mr. TILSON. Does that include ports of debarkation?

Mr. KAHN. You have soldier prisoners at various places in the country, and they are put to work doing things for the Government. Do you pay them?

Capt. DALY. No, sir. We are not interested in this item. We can not justify it, except that we put it in by orders. We were ordered to put it in the same as it has been put in for years.

(Thereupon, the committee adjourned to meet to-morrow, Thursday, January 10, 1918, at 10.30 o'clock, a. m.)

COMMITTEE ON MILITARY AFFAIRS,
HOUSE OF REPRESENTATIVES,
Thursday, January 10, 1918.

The committee met at 10.30 o'clock a. m., Hon. S. Hubert Dent, jr. (chairman) presiding.

STATEMENT OF MAJ. GEN. HENRY G. SHARPE, QUARTERMASTER GENERAL, ACCOMPANIED BY BRIG. GEN. I. W. LITTELL, BRIG. GEN. CHAUNCEY BAKER, COL. C. B. DRAKE, MAJ. C. O. ZOLLERS, AND MAJ. L. HARDEMAN, QUARTERMASTER CORPS.

Gen. SHARPE. Mr. Chairman, may I go back to the appropriation for subsistence, on page 29 of the bill, the second line, in reference to commutation of rations, for the cadets at West Point, at 40 cents per ration?

When we got back to the department yesterday this paper was in the office. We had not received it before. It is a communication from the treasurer of the Military Academy, requesting that the amount allowed for commutation of ration should be increased from 40 to 68 cents. The latter explains the reason for that advance in the cost of the ration, and I would like to ask that that increase be made in the bill, on line 4, page 29. I will submit the papers in the case for the record.

(The papers referred to are as follows:)

[Third indorsement.]

WAR DEPARTMENT,
ADJUTANT GENERAL'S OFFICE,
January 7, 1918.

To the Quartermaster General for preparation of the necessary papers with the view of having the change made and increase made available upon passage of the Army appropriation bill during the present session of Congress.

By order of the Secretary of War:

J. B. WILSON, *Adjutant General.*

OFFICE OF THE TREASURER,
UNITED STATES MILITARY ACADEMY,
West Point, N. Y., December 22, 1917.

From: The Treasurer, United States Military Academy.

To: The Superintendent, United States Military Academy.

Subject: Necessity for increase in cadet ration allowance.

1. The following data showing the necessity for an increase in the cadet ration allowance, in view of recent increases in price of foodstuffs, is presented for consideration with request that if deemed advisable the necessary steps be taken to have Congress grant an emergency increase during the present session.

2. (a) Inclosure No. 1 shows gradual and continuous increase in price of foodstuffs since February, 1916, which has caused an advance in price of cadet board from \$19.01 per month (65.8 cents per day) to \$29.01 per month (93.2 cents per day) during the same period. The present ration allowance for cadets of 40 cents per day will cover only 41 per cent of the cost of board.

(b) The subsistence allowance for cadets is analogous to the same allowance for the enlisted men, United States Army. The enlisted man, however, is subjected to no charge for the preparation and service of his food, whereas the cadet at present pays from his salary the expenses of wages of all employees of the cadet mess, for the supply and upkeep of china, linen, tableware, silverware, for cleaning material and for laundry of mess linen, as well as freight, express and all delivery expenses connected with the food and other supplies for the mess. When the commutation of rations for the cadets was fixed at 30 cents in 1902 the value of the enlisted ration was 18 cents. In 1915 when the enlisted ration was 23.5 cents, a proportionate increase to 40 cents in the cadet ration was asked for and granted to become effective July 1, 1916. The enlisted ration now being 41.7 cents, the cadet ration, according to the same proportionate increase, should be 68 cents plus.

3. Inclosure No. 2 shows a list of necessary cadet store articles used by cadets and is submitted to show added drain on the cadet's pay due to increase in prices now over those before the war.

B. A. DIXON, *Captain United States Army.*

[First Indorsement.]

UNITED STATES MILITARY ACADEMY,
West Point, N. Y., December 24, 1917.

TO THE ADJUTANT GENERAL OF THE ARMY,
War Department, Washington, D. C.

1. Forwarded, recommending that the item in the Army appropriation bill for the fiscal year 1918, subsistence of the Army, "For payments of commutation of rations of the cadets of the United States Military Academy in lieu of the regular established ration, at the rate of 40 cents per ration," be changed for fiscal year 1919 to make it "68 cents per ration," and that Congress be urged to make this change during the present session for the reasons stated in the body of this letter.

2. If practicable this increase should be made available upon passage of the Army appropriation bill during present session of Congress.

S. E. TILLMAN,
Colonel, United States Army, Superintendent.

[Second Indorsement.]

ADJUTANT GENERAL'S OFFICE,
December 29, 1917.

To the CHIEF OF STAFF.

Inclosure No. 1.

	February, 1916.	July, 1917.	November, 1917.
Bacon.....	\$0. 16½	\$0. 32	\$0. 42-\$0. 37
Beef.....	\$0. 13½ - .14	.17½	.19
Chicken.....	.22	\$0. 24 - .29	.28
Pork, pickled.....	.10½	.20	.26½
Pork loins.....	.13½ - .15	.22½ - .25	.27 - .30
Pork shoulder.....	.17½ - .20	.23	.29
Veal.....	.15½	.16 - .19	.16 - .22
Ham.....	.15 - .15½	.23½	.28½
Lamb.....	.15½ - .16½	.23	.22
Butter.....	.31	.38 - .39½	.45½
Flour, barrel.....	5. 50	12. 10	12. 10
Sugar, barrel.....	5. 90	8. 20	8. 42
Lard.....	.11½	.22½	.29
Eggs.....	.22 - .27	.36 - .40	.40
Potatoes, bushel.....	.84	1. 20	1. 69
Beans, issue.....	.05½	.14½	.14½
Milk.....	.06	.08	.10½
Board per month.....	19. 10	28. 92	27. 66
Board per day.....	.658	.932	.922
Commissary ration.....	.2352	.3687	.4171
Cadet ration.....	.30	.40	.40

Inclosure No. 2.

Article.	June, 1914.	Novem- ber, 1917.	Article.	June, 1914.	Novem- ber, 1917.
Full-dress coat.....	\$17.88	\$24.15	Buckskin gloves.....	\$1.30	\$2.15
Dress coat (blouse).....	13.19	19.05	Leggings.....	.63	1.15
Gray-cloth trousers.....	6.60	10.35	Gray flannel shirt.....	1.68	2.10
Overcoat.....	26.71	41.15	Gymnasium shoes.....	2.00	3.50
Flannel blouse.....	11.13	15.55	Uniform calf shods.....	4.17	5.90
Flannel trousers.....	5.16	8.25	Comfortable.....	2.25	3.30
Rain coat.....	13.36	12.00	Mattress.....	10.00	12.00
Campaign hat.....	3.76	4.25	Pillow.....	2.45	2.80
Full-dress hat.....	4.25	4.87	Pillowcase.....	.17	.24
White Army gloves, pair.....	.22	.40	Sheet.....	.45	.65
White lisle gloves, pair.....	.60	.90	Drawing instruments.....	13.25	14.78

All articles except uniforms will be higher when the market is entered again.

The main point of difference was that they were allowed 30 cents per ration by law, and that was in the Military Academy bill at that time.

Our rations cost about 18 cents at that time. Then it was raised to 40 cents, when the ration got over 20 cents. Now the rations will probably cost over 40 cents and therefore they say there is a necessity for increase to 68 cents.

Mr. GORDON. Why is it that the appropriation they ask for is higher than the ration?

Capt. DALY. The amount asked for, on an estimated per capita cost of 68 cents, is \$46,000.

Mr. TILSON. Mr. Gordon's question was why the increase is made to 68 cents.

Gen. SHARPE. That covers the cost of the ration.

Mr. GORDON. If the ration only costs 40 cents, why should you estimate it at 68 cents?

Gen. SHARPE. There is always an allowance over the actual cost of the ration to pay for waiters and mess attendants, and cooks, and that all comes out of the part they pay for commutation. It is based upon that amount. When they originally got 30 cents, the ration was only costing about 18 cents. Last year you allowed them 40 cents per ration, and the ration was costing less than that, the difference always being to cover the cost for mess attendants and cooks.

Mr. GORDON. Is there not an estimate made for the cost of the attendants and cooks?

Gen. SHARPE. No, sir; that is paid out of this amount.

Mr. GREENE. Is that true of all parts of the service?

Gen. SHARPE. It is true only at West Point.

Mr. GARRETT. You mean, when you say the cost of the ration is 68 cents, that that is the cost of three meals a day?

Gen. SHARPE. That is for the whole day; yes, sir.

Capt. DALY. In connection with this item, if this amount asked for is allowed, the amount of the item will be increased from \$146,000 to \$248,000, under that particular item.

The CHAIRMAN. What is the increase?

Capt. DALY. The actual increase is \$102,200.

Gen. SHARPE. That would make the total amounts under subsistence \$298,505,855.57.

INCIDENTAL EXPENSES.

The CHAIRMAN. The next item is, "Incidental expenses, Quartermaster Corps," and the amount of the estimate is \$10,457,814.59. You got under that item \$19,000,000 at the last session of Congress, and under that item this year you are asking for \$10,000,000. Is that decrease accounted for largely on account of the initial cost of the articles, which you will not have to buy next year?

Capt. DALY. That is one of the reasons. The additional reason is that for this fiscal year, during the early part of the fiscal year, and up to now, we have had to hire a great many civilians. Those are now being replaced by enlisted men and that reduces the appropriation.

The CHAIRMAN. For what purpose are they employed?

Capt. DALY. As laborers and mechanics. It is also due to the fact that we were required to purchase an initial stock of various supplies, and the appropriation asked for the fiscal year 1919, contemplates merely replenishment.

Gen. SHARPE. I will submit a table showing the amounts under the various items.

The CHAIRMAN. Under each item?

Gen. Sharpe. It gives an explanation of each item.

The CHAIRMAN. I also would like to have you put in the record a statement showing how much you have spent of this appropriation last year, and what you have contracted for up to date. Is there anything special in the item you submit, other than the detailed statement?

Gen. SHARPE. No, sir: the statement shows it all, with the explanation under each item.

Mr. McKENZIE. You buy all the supplies for the Army, both at home and abroad, as I understand it, through your department?

Gen. SHARPE. Yes, sir.

Mr. McKENZIE. In the purchase of articles, have you been purchasing sawmills for use in France.

Gen. SHARPE. Those have been all bought by the Engineer Department.

Mr. McKENZIE. Does it go through your office at all?

Gen. SHARPE. No, sir. It is entirely under the Engineer Department and comes out of the engineer funds. The regulations provided that the Quartermaster Corps should provide for all construction work, and the operation of roads and construction and operation of steamboats, but they say further that in the zone of advance the Engineer Department will have charge of all of those activities. That would make a complication and might lead to a duplication of work, and so Gen. Black and I talked the matter over, and I wrote a letter to the Secretary of War saying that I thought all of France should be considered as the zone of the advance, so that we would not be duplicating any purchases or personnel, so that they now have all construction work and the operation of the roads, and the repair of all roads in France.

Mr. McKENZIE. We can get that information from Gen. Black?

Gen. SHARPE. Yes, sir: he will have that as a part of his appropriation.

Mr. TILSON. Does that include ports of debarkation?

Gen. SHARPE. It includes ports of debarkation; yes, sir.

Mr. TILSON. Do the engineers have entire charge of the wharves etc.?

Gen. SHARPE. Not entirely, at ports of debarkation. We did contemplate having the loading of the ships by the stevedore regiments, and with some of the machinery on the docks that we provided. Gen. Littell can give you that data more complete. We have not provided for the construction of any buildings on the other side, except the construction of motor repair shops. We build those buildings here and send them to France, with the approval of the Chief of Engineers, and also for the construction of ice plants.

Mr. TILSON. This is what I am trying to get at. We all know that lack of facilities at ports of debarkation is one of the crying needs in this war. One of our great troubles is lack of facilities at the ports of debarkation. - We need construction, and we need a great many things there; and I was trying to locate where the responsibility finally rests, whether it would rest upon your department or the Engineering Department.

Gen. SHARPE. I do not understand that we are going to do any construction except that which I have mentioned; but Gen. Littell can give you the data about that.

Gen. LITTELL. The Quartermaster Corps has done nothing at all in the way of construction, for the reasons stated by the Quartermaster General, except the purchasing and shipment of these units of some portable buildings for the repair units, and we are building a large ice house there, and there is the possibility of building some small ones. We are actually building the ice plant now. All other construction work has been done by the Corps of Engineers.

Mr. KAHN. Will you employ the labor over there?

Gen. SHARPE. No, sir; we have to send the labor over.

Mr. KAHN. You have to send it from this side?

Gen. SHARPE. Yes, sir.

Mr. KAHN. Is it civilian labor?

Gen. SHARPE. We have had civilian labor on some of the ice-plant work, but they do not want civilian labor sent over, if they can possibly avoid it.

Mr. KAHN. Are all the men who are putting up these buildings you have on the other side enlisted men?

Gen. SHARPE. I think not. The only buildings we are putting up are the ice plants and the knockdown buildings. I think they are merely men employed temporarily, and when they get through with this they will come home.

Gen. LITTELL. In reference to these ice plants, there has been a unit formed for assisting in the construction of it, to put up the machinery, and also for the running of the plant after it is finished. It is an organization with a major and several captains and some lieutenants, and the other men are enlisted for that purpose. They will run the plant and aid on the construction work which Gen. Pershing wants done. He insisted that a certain number of men be sent over there, of a certain class, to do some of the construction work. I presume they will be on their way in a few days, and some of them have gone. When they have completed their work, unless Gen. Pershing desires their services longer, they will return. They are all civilians.

Mr. KAHN. These stevedore troops are quartermaster's troops. are they not?

Gen. SHARPE. Yes, sir.

Mr. KAHN. Colored?

Gen. SHARPE. Colored; yes, sir.

Mr. KAHN. How are they officered?

Gen. SHARPE. By white men.

The CHAIRMAN. Taken from the officers already in the Army?

Gen. SHARPE. They were specially selected as men who are supposed to have had stevedore experience and were selected on that account.

(The details of the estimate are as follows:)

ESTIMATE INCIDENTAL EXPENSES, QUARTERMASTER CORPS.

Deficiency act, June 15, 1917.....	\$8, 000, 000
Deficiency act, Oct. 6, 1917.....	9, 000, 000
Total.....	17, 000, 000

Appropriation incidental expenses, fiscal year 1919.

[Based on an average of 1,612,245 men.]

Item No.	Purpose.	Current requirements.		Total.	Per capita.
		United States.	Philippine Islands.		
166	Postage.....	\$75, 288. 48	\$400. 00	\$75, 688. 48	\$0. 047
167	Telegrams, cablegrams, and telephones.....	2, 195, 722. 71	5, 000. 00	2, 200, 722. 71	1. 365
171	Extra-duty disciplinary barracks.....	54, 366. 75	.....	54, 366. 75	. 034
177	Office furniture.....	116, 576. 95	3, 000. 00	119, 576. 95	. 074
178	Towels.....	29, 315. 39	350. 00	29, 665. 39	. 018
179	Laborers.....	205, 207. 73	8, 000. 00	213, 207. 73	. 132
180	Interpreters.....	109, 000. 00	7, 000. 00	116, 000. 00	. 072
181	Spies.....	81, 000. 00	.....	81, 000. 00	. 050
182	Guides.....	15, 207. 73	600. 00	15, 807. 73	. 010
183	Clerks.....	1, 315, 186. 84	118, 000. 00	1, 433, 186. 84	. 889
184	Other employees.....	449, 730. 85	37, 500. 00	487, 230. 85	. 302
185	Clerks, disciplinary barracks.....	7, 000. 00	.....	7, 000. 00	. 004
186	Foremen, disciplinary barracks.....	3, 600. 00	.....	3, 600. 00	. 002
188	Organist.....	104. 00	.....	104. 00	.....
189	Recruiting.....	732, 884. 75	1, 200. 00	734, 084. 75	. 455
190	Deserters and escaped military prisoners.....	586, 307. 80	2, 000. 00	588, 307. 80	. 365
191					
192	Donations, \$5, discharged prisoners.....	146, 576. 95	500. 00	147, 076. 95	. 091
195	Picket rope.....	26, 383. 85	500. 00	26, 883. 85	. 017
196	Blacksmiths' tools.....	293, 153. 90	4, 000. 00	297, 153. 90	. 184
197	Horseshoes.....	1, 295, 740. 24	10, 000. 00	1, 305, 740. 24	. 810
199	Shoeing horses and mules.....	100, 000. 00	11, 000. 00	111, 000. 00	. 069
200	Chests and issue outfits.....	146, 576. 95	.....	146, 576. 95	. 091
201	Additional expenses.....	2, 233, 832. 72	30, 000. 00	2, 263, 832. 72	1. 404
Total.....		10, 218, 764. 59	239, 050. 00	10, 457, 814. 59	6. 485

Item 166.—Postage.

[Estimate fiscal year 1919, \$75,688.48.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$75, 288. 48	.....	\$75, 288. 48	\$400. 00	.....	\$400. 00	\$75, 688. 48
Appropriated, fiscal year 1918...	3, 836. 37	.....	3, 836. 37	400. 00	.....	400. 00	4, 236. 37
Expended, fiscal year 1917.....	9, 355. 88	.....	9, 355. 88	770. 59	.....	770. 59	10, 126. 47

REMARKS.

The amount appropriated for the fiscal year 1918 was \$5,890.10 less than the cost. fiscal year 1917.
The increase of \$71,452.11 in this item over the appropriation, fiscal year 1918. is due to the increased strength of the Army.

Item 167.—Telegrams.

[Estimate fiscal year 1919, \$2,200,722.71.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New construc-tion.	Total.	Current require-ments.	New construc-tion.	Total.	
Estimate.....	\$2,195,722.71	.....	\$2,195,722.71	\$5,000.00	.....	\$5,000.00	\$2,200,722.71
Appropriated, fis-cal year 1918.....	105,561.21	.....	105,561.21	21,000.00	.....	21,000.00	126,561.21
Expended, fiscal year 1917.....	115,987.08	.....	115,987.08	13,149.92	.....	13,149.92	129,137.00

REMARKS.

The estimate under this item shows an increase of \$2,074,161.50 over the amount appropriated for the fiscal year 1918.
The amount appropriated for the fiscal year 1918 is \$2,575.79 less than the cost for the fiscal year 1917.
The increase is based on per capita cost.
In view of the greatly increased activities incident to the movement of troops and the maintenance of armies in the field, it is estimated that the cost under this item, for the fiscal year 1919, will materially exceed the appropriation for the fiscal year 1918.

Item 171.—Extra-duty pay to soldiers of the United States Disciplinary Barracks Guard

[Estimate fiscal year 1919, \$54,366.75.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New construc-tion.	Total.	Current require-ments.	New construc-tion.	Total.	
Estimate.....	\$54,366.75	.....	\$54,366.75	.....	.....	.....	\$54,366.75
Appropriated fiscal year 1919.....	51,957.75	.....	51,957.75	.....	.....	.....	51,957.75
Expended fiscal year 1917..	51,957.75	.....	51,957.75	.....	.....	.....	51,957.75

Increase of \$2,409 is due to increased strength of the United States Disciplinary Barracks Guards, as follows:

Item 171.—Extra-duty pay to soldiers of the United States Disciplinary Barracks Guard.

Combined strength, First and Second companies, Fort Leavenworth, Kans.:	
First sergeants.....	2
Mess sergeants.....	2
Supply sergeants.....	2
Sergeants.....	16
Corporals.....	34
Cooks.....	6
Buglers.....	4
Mechanics.....	4
Privates, first class.....	56
Privates.....	174
Total.....	300
Combined strength, Third and Fourth companies, Alcatraz, Cal., is the same as that indicated above.....	
	300

Authorized strength, Fifth Company, Fort Jay, N. Y.:

First sergeants.....	1
Supply sergeants.....	1
Sergeants.....	4
Corporals.....	6
Cooks.....	2
Buglers.....	2
Mechanics.....	1
Privates, first class.....	12
Privates.....	36
Total.....	65
One guard at each barracks has the rank, pay, and allowance of a battalion sergeant major.....	3
Grand total.....	68

Item 177.—Office furniture authorized.

[Estimate fiscal year 1919, \$119,576.95.]

	United States.			Philippine Islands.			Grand. total.
	Current require- ments.	New construc- tion.	Total.	Current require- ments.	New construc- tion.	Total.	
Estimate.....	\$116,576.95		\$116,576.95	\$3,000.00		\$3,000.00	\$119,576.95
Appropriated, fiscal year 1918.....	23,765.81		23,765.81	3,000.00		3,000.00	26,765.81
Expended, fiscal year 1917.....	113,294.76		113,294.76	742.08		742.08	114,036.84

REMARKS.

Increase of \$92,811.14 is based on a per capita cost.

Supplies.—The supplies to be purchased under this item to meet current requirements are such articles as office tables, desks, chairs, file boxes, and cases, copy presses, water coolers, cuspidors and mats, clocks, rugs, linoleum, desk and waste-paper baskets, shears, etc., and such other Class A and Class D supplies as may be required to replace unserviceable articles at all posts, and equip newly established offices.

Services.—The services to be procured under this item are such repairs as may be required from time to time for placing office furniture in serviceable condition.

The following statement shows the offices and the number of rooms for which office furniture has to be supplied:

	UNITED STATES.			PHILIPPINE ISLANDS.	
	Offices.	Rooms.		Offices.	Rooms.
3 department headquarters.....	25	200	At posts (22).....	142	340
3 Artillery district headquarters..	8	15	At department headquarters.....	4	36
29 coast-defense headquarters.....	116	348	At depots, etc.....	7	42
4 division headquarters.....	16		Total.....	153	418
11 brigade headquarters.....	11		Grand total.....	1,321	4,178
170 posts and stations.....	894	2,619			
15 military attachés.....	24	72			
60 recruiting stations.....	58	290			
21 depots, etc.....	21	211			
Total.....	1,168	3,755			

The above statement does not include officers' quarters at National Guard and National Army Cantonments in the United States and in France.

Item 178.—Towels. issue of.

[Estimate fiscal year 1919, \$29,665.39.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$29,315.39	.....	\$29,315.39	\$350.00	.....	\$350.00	\$29,665.39
Appropriated fiscal year 1918..	4,105.42	.....	4,105.42	350.00	.....	350.00	4,455.42
Expended fiscal year 1917.....	71,279.29	.....	71,279.29	4,924.84	.....	4,924.84	76,204.13

REMARKS.

The estimated amount is based on per capita cost.
The following extract from Army Regulations, 1913, paragraph 1215, as amended by C. A. R. 17, governs the issue of towels:
"9. Towels, huck: For use in the offices of regimental headquarters, when adjuncts of post headquarters, and in the offices of post and coast defense staff officers, in bakeries, and in offices of department and depot quartermasters when the necessity for the issue is certified to by the commanding officer: For each person whose employment therein is authorized, not to exceed two towels a year."

Item 179.—Laborers, hire of, in the Quartermaster Corps.

[Estimates fiscal year 1919, \$213,207.73]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$205,207.73	.....	\$205,207.73	\$8,000.00	.....	\$8,000.00	\$213,207.73
Appropriated fiscal year 1918.....	83,225.00	.....	83,225.00	7,500.00	.....	7,500.00	90,725.00
Expended fiscal year 1917..	1,128,567.72	.....	1,128,567.72	37,474.25	.....	37,474.25	1,166,041.97

REMARKS.

This amount covers the hire of laborers at salaries ranging from \$120 to \$1,200 per annum. (For list of laborers see Book of Estimates, 1919.)

Item 180.—Interpreters.

[Estimates fiscal year 1919, \$116,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$109,000.00	.....	\$109,000.00	\$7,000.00	.....	\$7,000.00	\$116,000.00
Appropriated fiscal year 1918.....	20,600.00	.....	20,600.00	8,000.00	.....	8,000.00	28,600.00
Expended fiscal year 1917..	11,235.35	.....	11,235.35	7,696.43	.....	7,696.43	18,931.78

REMARKS.

For list of interpreters see Book of Estimates, 1919.

Item 181.—Spies, hire of, for the Army.

[Estimate fiscal year 1919, \$81,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate	\$81,000.00		\$81,000.00				\$81,000.00
Appropriated, fiscal year 1918.....							
Expended, fiscal year 1917.....	38,345.93		38,345.93				38,345.93

REMARKS.

For hire of spies for duty with the expeditionary forces. (For list of spies see Book of Estimates, 1919.)

Item 182.—Guides, hire of, for the Army.

[Estimate fiscal year 1919, \$15,807.73.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate	\$15,207.73		\$15,207.73	\$600.00		\$600.00	\$15,807.73
Appropriated, fiscal year 1918.....	714.35		714.35	500.00		500.00	1,214.35
Expended, fiscal year 1917.....	32,593.55		32,593.55	240.00		240.00	32,833.55

REMARKS.

For hire of guides as their services may be required for duty abroad. (For list of guides see Book of Estimates, 1919.)

Item 183.—Clerks, compensation of, to officers of the Quartermaster Corps.

[Estimate fiscal year 1919, \$1,433,186.84.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$1,315,186.84		\$1,315,186.84	\$118,000.00		\$118,000.00	\$1,433,186.84
Appropriated, fiscal year 1918.....	663,000.00		663,000.00	118,000.00		118,000.00	781,000.00
Expended, fiscal year 1917.....	1,294,477.57		1,294,477.57	76,202.96		76,202.96	1,370,680.53

REMARKS.

Increase of \$652,186.84 is based on a per capita cost.

Under this item are paid such employees as chief clerks, clerks employed in keeping accounts of money and property, preparing vouchers, contracts, etc.; records and correspondence clerks; stenographers and typewriters, and similar clerical assistance.

This amount covers the hire of clerks at salaries ranging from \$360 to \$2,500 per annum. (For list of employees see Book of Estimates, 1919.)

Item 184.- Other employees, compensation of, to the officers of the Quartermaster Corps.
[Estimate fiscal year 1919, \$487,230.85.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$449,730.85		\$449,730.85	\$37,500.00		\$37,500.00	\$487,230.85
Appropriated fiscal year 1918.....	278,062.50		278,062.50	37,500.00		37,500.00	315,562.50
Expended fiscal year 1917.....	706,124.61		706,124.61	70,768.43		70,768.43	776,893.04

Item 184.- Other employees, compensation of, to the officers of the Quartermaster Corps.

Increase of \$171,668.35 is based on a per capita cost.
Under this item are paid such employees as civil engineers, superintendents of construction, inspectors of construction, electrical and mechanical engineers, draftsmen, rodmen, custodians, caretakers, storekeepers, watchmen, gardeners, messengers, janitors, scrubbers, horseshoers and farriers, elevator conductors, foremen, foresters, inspectors, packers, superintendents, telephone operators, etc. It covers the hire of employees at salaries ranging from \$12 to \$2,500 per annum in the United States and possessions. (For list of employees see Book of Estimates, 1919.)

Item 185. - Clerks, United States Disciplinary Barracks.
[Estimate fiscal year 1919, \$7,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$7,000.00		\$7,000.00				\$7,000.00
Appropriated, fiscal year 1918.....	8,800.00		8,800.00				8,800.00
Expended, fiscal year 1917.....	9,950.35		9,950.35				9,950.35

REMARKS.

Under this item are employed four clerks for the United States Disciplinary Barracks at Fort Leavenworth, Kans., and one clerk for the Pacific branch, of Alcatraz Island, Cal.

Item 186.- Foreman, United States Disciplinary Barracks.
[Estimate fiscal year 1919, \$3,600.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$3,600.00		\$3,600.00				\$3,600.00
Appropriated, fiscal year 1918.....	5,300.00		5,300.00				5,300.00
Expended, fiscal year 1917.....	5,550.00		5,550.00				5,550.00

REMARKS.

Under this item are employed three foremen for the United States disciplinary barracks at Fort Leavenworth, Kans., at \$1,200 per annum.
Item 187, watchmen, United States disciplinary barracks.—No estimate for the fiscal year 1919. The two watchmen at the United States disciplinary barracks, Fort Leavenworth, Kans., have been replaced by enlisted men.

Item 188.—Organist, United States disciplinary barracks.

[Estimate fiscal year 1919, \$104.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$104.00	.....	\$104.00	.....	.....	.....	\$104.00
Appropriated fiscal year 1918....	104.00	.....	104.00	.....	.....	.....	104.00
Expended fiscal year 1919.....	104.00	.....	104.00	.....	.....	.....	104.00

REMARKS.

This item represents payment to organist at the United States disciplinary barracks at Fort Leavenworth, Kans., for 52 Sundays, at \$2 per Sunday.

Item 189.—Recruiting, incidental expenses of.

[Estimate fiscal year 1919, \$734,084.75.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$732,884.75	.....	\$732,884.75	\$1,200.00	.....	\$1,200.00	\$734,084.75
Appropriated fiscal year 1918.....	291,461.96	.....	45,361.96	1,000.00	.....	1,000.00	292,561.96
Expended fiscal year 1917....	150,356.83	.....	150,356.83	1,000.00	.....	1,000.00	151,356.83

REMARKS.

Item 189.—Recruiting.

Increase of \$441,552.79 is based on a per capita cost.

Supplies.—The supplies to be purchased under this item are such articles as chairs, desks, recruiting scales, signs, linoleum, water coolers, multigraphs, sweeping compound, tape measures, bookcases for blanks, etc.

Services.—The services to be procured are painting signs, erection of flagstaffs, repairs to furniture, and such other services as may be required from time to time.

This item also covers the cost of recruiting baths, bill posting, advertising, drayage, ice, laundry, telephone service, removal of garbage, drinking water, and printing.

Items 190 and 191.—Deserters and escaped military prisoners, apprehension of, etc.

[Estimate fiscal year 1919, \$588,307.80.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$586,307.80	.....	\$586,307.80	\$2,000.00	.....	\$2,000.00	\$588,307.80
Appropriated fiscal year 1918.....	118,000.00	.....	118,000.00	2,000.00	.....	2,000.00	120,000.00
Expended fiscal year 1917....	155,711.54	.....	155,711.54	1,576.37	.....	1,576.37	157,287.91

REMARKS.

The amount appropriated, fiscal year 1918, was \$37,287.91 less than the cost, fiscal year 1917.

Increase of \$468,307.80 is based on the increased strength of the Army.

For the apprehension, securing, and delivering of and the expenses incident to the pursuit of deserters and escaped military prisoners, and no greater sum than \$50 for each deserter or escaped military prisoner shall, in the discretion of the Secretary of War, be paid to any civil officer or citizen for such service and expenses. (Q. M. G. O., Circular 10, Mar. 29, 1915.)

ADJUTANT GENERAL'S OFFICE, July 26, 1917.

The QUARTERMASTER GENERAL OF THE ARMY:

* * * However, the number of apprehensions as compared with the strength of the Army during the fiscal year 1917 was in round numbers 1 in every 100. * * *

By order of the Secretary of War.

EDWARD T. DONNELLY, *Adjutant General*.

Item 192.—Donation of \$5 to discharged prisoners.

[Estimate fiscal year 1919, \$147,076.95.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$146,576.95	.....	\$146,576.95	\$500.00	.....	\$500.00	\$147,076.95
Appropriated, fiscal year 1918.....	18,000.00	.....	18,000.00	500.00	.....	500.00	18,500.00
Expended, fiscal year 1917...	14,402.67	.....	14,402.67	113.33	.....	113.33	14,516.00

REMARKS.

Increase of \$128,576.95 based on a per capita cost.

This item covers the payment of \$5 to each dishonorably discharged prisoner upon his release from confinement under court-martial sentence involving dishonorable discharge.

Item 195.—Picket ropes.

[Estimate fiscal year 1919 \$26,883.85.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$26,383.85	.....	\$26,383.85	\$500.00	.....	\$500.00	\$26,883.85
Appropriated, fiscal year 1918.....	716.66	.....	716.66	750.00	.....	750.00	1,466.66
Expended, fiscal year 1917..	66,382.56	.....	66,382.56	249.33	.....	249.33	66,631.89

Item 195—Picket ropes.—Increase of \$25,417.19 is based on per capita cost. This item covers supply of manila rope in field service, and wire rope, posts, and erection of permanent picket lines in connection with Artillery stables. The cost of the picket rope for each battery of Field Artillery is over \$15, at 4 cents per foot. In addition there is chargeable to this item the erection of cedar or other posts for the support of permanent picket lines at Light Artillery posts. Estimate is therefore based on the following: One picket rope for each battery costs, approximately, \$15. (See also General Orders, No. 78, War Department, Oct. 17, 1914.)

Item 196.—Blacksmith's tools and materials.

[Estimate fiscal year 1919, \$297,153.90.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$293,153.90	.....	\$293,153.90	\$4,000.00	.....	\$4,000.00	\$297,153.90
Appropriated, fiscal year 1918.....	26,758.82	.....	26,758.82	4,000.00	.....	4,000.00	30,758.82
Expended, fiscal year 1917.....	113,698.57	.....	113,698.57	2,178.79	.....	2,178.79	115,877.36

REMARKS.

Item 196—Blacksmith's tools and materials.—Increase of \$226,395.08 is based on a per capita cost. This item covers supply of anvils, leather aprons, chisels, cinch cutters, dividers, files, hammers, hardies, nippers, rasps, stock and dies, tongs, vises, wrenches, etc., for blacksmith shops, and smithing coal. Blacksmiths' tools, including forges for the Cavalry, Field Artillery regiments, and machine-gun platoons required for field service are furnished by the Ordnance Department.

Item 197.—Horseshoes.

[Estimate fiscal year 1919, \$1,305,740.24.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$1,295,740.24	.....	\$1,295,740.24	\$10,000.00	.....	\$10,000.00	\$1,305,740.24
Appropriated, fiscal year 1918.....	64,828.80	.....	64,828.80	10,000.00	.....	10,000.00	74,828.80
Expended, fiscal year 1917.....	168,699.97	.....	168,699.97	136.33	.....	136.33	168,836.30

REMARKS.

The amount appropriated, fiscal year 1918, was \$94,007.50 less than the cost for the fiscal year 1917.

The increase of \$1,230,911.44 is based on a per capita cost.

This item covers the cost of horseshoes, nails, calks, etc., for approximately 403,061 animals.

Item 199.—Shoeing horses and mules.

[Estimate, fiscal year 1919, \$111,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$100,000.00	.....	\$100,000.00	\$11,000.00	.....	\$11,000.00	\$111,000.00
Appropriated, fiscal year 1918.....	37,006.10	.....	37,006.10	11,000.00	.....	11,000.00	48,006.10
Expended, fiscal year 1917.....	23,027.13	.....	23,027.13	201.29	.....	201.29	23,228.42

REMARKS.

Increase of \$62,993.90 is based on a per capita cost. This item covers the cost of shoeing of approximately 403,061 animals.

Item 200. -Chests and issue outfits.

[Estimate fiscal year 1919, \$146,576.95.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$146,576.95		\$146,576.95				\$146,576.95
Appropriated fiscal year 1918.....	10,586.93		10,586.93				10,586.93
Expended fiscal year 1917..	15,038.01		15,038.01	\$78.56		\$78.56	15,116.57

Item 200—Chests and issue outfits.—Increase of \$135,990.02 is based on a per capita cost.

Issuance of commissary chests is provided for by General Orders No. 105, War Department, 1911, amending paragraph 343, Manual for the Subsistence Department, making an allowance of four commissary chests to each division headquarters.

Commissary chests are described in paragraph 268, Manual for the Subsistence Department; they contain among other articles the following: One ax; one bag, canvas, for nails; bags, cotton and gunny; blades, meat saw; scoops; screw drivers; candlesticks; cleaver; clothesline; faucets; hatchet; twine; lanterns, folding; nails; opener, box; pencils; lumber; saws; scales.

Item 201.—Additional expenditures not expressly assigned to any other department.

[Estimate fiscal year 1919, \$2,263,832.72.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$2,233,832.72		\$2,233,832.72	\$30,000.00		\$30,000.00	\$2,263,832.72
Appropriated fiscal year 1918.....	103,804.78		103,804.78	25,000.00		25,000.00	128,804.78
Expended fiscal year 1917.....	806,765.09		806,765.09	58,563.11		58,563.11	865,328.20

Item 201.—Additional expenditures not expressly assigned to any other department.—The increase of \$2,135,027.94 is based on a per capita cost.

Purchases under this item comprise such supplies as crude oil, acids, etc., for the destruction of mosquitoes and other vemin, disinfectants, soaps, lye, polishes, dictionaries, books, maps, mail boxes, ladders, paints, oils, brushes, mops, numbering machines, coffins, adding machines, flagstuffs, drafting and surveying instruments and materials and repairs for the instruments, office signs, door numbers, sentry boxes, etc.

Services are procured for the care and maintenance of post cemeteries, erection and repair of flagstuffs, repair of surveying and drafting instruments, preparation of reservation maps, setting boundary stones, recording deeds, and other necessary expenses authorized by law and not otherwise provided for.

(Thereupon the committee adjourned until tomorrow, Friday, January 11, 1918, at 10.30 o'clock a. m.)

ARMY APPROPRIATION BILL, 1919.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON MILITARY AFFAIRS,
Friday, January 11, 1918.

The committee met at 10.30 o'clock a. m., Hon. S. Hubert Dent (chairman) presiding.

STATEMENTS OF MAJ. GEN. HENRY G. SHARPE, QUARTERMASTER GENERAL, AND MAJ. GEN. GEORGE W. GOETHALS, ACTING QUARTERMASTER GENERAL, ACCOMPANIED BY BRIG. GEN. CHAUNCEY BAKER, BRIG. GEN. I. W. LITTELL, COL. C. B. DRAKE, COL. J. S. FAIR, MAJ. L. HARDEMAN, AND CAPT. C. P. DALY, QUARTERMASTER CORPS.

The CHAIRMAN. Gen. Goethals desires to make a statement to the committee before we proceed further with the items in the bill.

Gen. GOETHALS. Mr. Chairman, Mr. Kahn called attention on Wednesday to a statement which appeared in the Army and Navy Register concerning the condition of tent equipment at Camp Mills. I said at that time that the Inspector General had been asked to look into the matter, and Mr. Kahn asked me to get the report and submit it to this committee, and I would like to present it to the committee at this time. The communication that caused this investigation was made to the Secretary of War and was accompanied by photographs taken at Camp Mills.

The following telegram was received on Wednesday:

GOVERNORS ISLAND, N. Y., *January 9, 1918.*

QUARTERMASTER GENERAL OF THE ARMY,
Washington.

Re telegram to-day signed Goethals; report of action taken reference wire of 2d relative to abandonment of property at Camp Mills was made to Adjutant General-January 2, prior detachment of 73 Quartermaster Corps men, 45 from Madison Barracks, under 6 quartermaster officers, on duty at Camp Mills. Now engaged in packing and shipping property to depots as ordered. Forty-first division left tents standing soaked from rain; weather changed and tents are frozen to ground and buried in snow. Attempts to dig out tents proved greater damage would result than from allowing them to stand. When thaw permits tents will be taken down and shipped—serviceable to New York and others warranting repair to Philadelphia depot as directed. Col. George D. Moore, from Inspector General's office, Washington, inspected camp January 2 and can give details.

KNOWLTON.

The following is the report:

JANUARY 9, 1918.

From: Col. George D. Moore, inspector General.

To: The Inspector General of the Army.

Subject: Report of investigation of conditions at Camp Albert L. Mills, N. Y.

1. This investigation was made January 3-4, 1918, pursuant to instructions of the Secretary of War.

2. It was alleged in a communication to the Secretary of War, appended hereto, that Camp Mills had apparently been abandoned, large quantities of tentage being left without guard and exposed to destruction by the weather. Inclosed with the communication were four small photographs, said to be actual view of the camp, showing wrecked tentage.

3. Interviews were had with Lieut. Col. J. C. Johnson, inspector general Eastern Department; Maj. C. H. Smith, New York National Guard, camp quartermaster,

Camp Mills, N. Y. (Maj. F. H. Adams, Quartermaster Corps, having been relieved previous to the inspection); and several of the commissioned and noncommissioned personnel of the camp quartermaster's office at Camp Mills. I personally inspected the entire camp and the storehouse of the camp quartermaster.

4. The photographs accompanying the communication to the Secretary of War were evidently authentic as samples of the general conditions in the camp. Several hundred tents of all kinds were frozen tightly into the ground; some were standing, others partly or wholly down, and in many cases frozen into a solid mass of ice and snow. Careful inspection indicates that a considerable portion of the tentage is still in good condition and that at least 50 per cent can be repaired for further use. Considerable canvas that has been torn by the wind can be used for repairs. It will be impossible to move any of this canvas until the ground is softened enough to permit of digging out the tents without tearing them.

The facts as to the "abandonment" of the camp are as follows:

Pursuant to telegram of instructions (A. G. O. 652, Camp A. L. Mills (Miscellaneous Division), organizations of the Forty-first Division were moved on various dates from Camp Mills to Tenaflly, N. J., by the commanding general, port of embarkation. In this connection, attention is invited to the inclosed copies of correspondence relative to the abandonment of Camp Mills. It appears that arrangements were made October 17, 1917, for the removal of troops of the Forty-first Division arriving at that place to Tenaflly, N. J., by the commanding general, port of embarkation, Hoboken, N. J. This removal was made as accommodations were available at Tenaflly. The movement began November 25, 1917, and continued until December 14, 1917. As each organization moved, details were made from those remaining in camp to take down and pack tentage and property left by those leaving. Before December 11 nearly 14,000 men had been moved. On the night of December 10-11 a violent rain and snow storm came on, continuing for a day or two. Arrangements had been made for moving over 8,000 men on December 11, and they were moved on that date. It was impossible to take down the tents in their wet condition, and many blew down and were frozen into the ground during the storm. The weather has been intensely cold ever since and other tents have been weighted down with snow. Many tents have only the skirts frozen into the ground, these having been banked with earth by the occupants to keep out the cold wind, no floors being provided.

The camp quartermaster has been working with all available force to collect and ship all property. He has also made efforts to salvage tents, but it has been found impossible to remove these without destroying them. A guard has been on duty continuously. It was stated that a few persons had been arrested for attempting to steal property.

The property collected from the camp had been mostly shipped away at the time of this inspection, the storehouse being still full of miscellaneous articles. The greater part of the property gathered up had to be stored on the platform and on the ground near the railway tracks and protected as well as practicable by paulins; however, much of it was unavoidably exposed, and some deterioration resulted.

5. CONCLUSIONS.

(a) That unforeseen weather conditions are responsible for the state of the tentage remaining at Camp Mills, N. Y.

(b) That due diligence has been maintained in the protection of Government property in the camp.

(c) That lack of storage facilities caused some damage to property, this condition being a result of the contemplated disuse of the camp during the winter months.

(d) That it will be necessary to maintain a storehouse and guard at Camp Mills until thawing of the ground permits of the removal of the tents with the least damage possible.

6. RECOMMENDATION.

That provision be made for guarding the tentage at Camp Mills, N. Y., until such time as it is practicable to undertake its salvage.

GEO. D. MOORE.

It is not due to the negligence of anybody in the Army.

Mr. TILSON. There is only one possible condition where there might have been neglect, and that is whether they were taken down as quickly as possible after their use by this contingent.

Gen. GOETHALS. That is what the inspector states, "as each organization moved, details were made composed from those remaining in camp at take down and pack tentage and property left by those leaving."

Mr. KAHN. Did they do that?

Gen. GOETHALS. They did.

Mr. KAHN. And there was no place to store it?

Gen. GOETHALS. No place to store it, except along the track.

Mr. TILSON. And they did not take it down because of the weather conditions?

Gen. GOETHALS. The weather conditions, subsequent.

Mr. TILSON. The weather conditions that happened before they could have taken it down?

Gen. GOETHALS. Yes.

Mr. KAHN. And the weather conditions have continued very bad ever since. The article I read indicated that the property had all been left there without anybody to look after it, and that it was left at the camp in that condition.

Gen. GOETHALS. A guard was left at the camp, and the Quartermaster's men put there to take charge of the property, and they are still there.

There is another statement I would like to make, Mr. Chairman, and that is in regard to the matter of clothing. I noticed a clipping in the Washington Post of yesterday relative to the testimony given by Admiral McGowan before the Senate investigation committee which, by comparison, reflects on the Quartermaster Corps unjustly. The newspaper article states that Admiral McGowan "declared, emphatically too, that the Navy has not found it necessary to resort to shoddy in Navy garments and denies that shortage in the wool made the use of shoddy necessary." Then it goes on to say, later on, "every man on the fighting ships of the Nation and at the training stations has two all-wool blankets, McGowan said, and there is a reserve supply at the various navy yards to provide two more for each man."

A man formerly connected with Admiral McGowan's office in the purchase of blankets and uniforms has been commissioned as an officer in the Quartermaster Corps, and he told me that the statement which appeared in yesterday's Post is not correct, and so I wrote Admiral McGowan and asked him whether the statement was a correct statement of his testimony, or whether he had been misquoted. I got a letter from him yesterday afternoon, in which he says:

THE PAYMASTER GENERAL OF THE NAVY.

Washington, January 10, 1918.

Gen. GEORGE W. GOETHALS, United States Army.

Acting Quartermaster General of the Army.

MY DEAR GENERAL: Referring to your personal note of his afternoon and in pursuance of my offer, made a little later to you by telephone, it gives me a great deal of pleasure to inclose herewith copy of letter I have sent to the chairman of the Senate Military Committee, correcting the error in my testimony yesterday in regard to the question of all-wool garments for the enlisted men in the Navy.

Yours, sincerely,

S. M. MCGOWAN,
Paymaster General of the Navy.

The letter to Senator Chamberlain, referred to in Admiral McGowan's letter to me, is as follows:

NAVY DEPARTMENT,
BUREAU OF SUPPLIES AND ACCOUNTS,
Washington, D. C., January 10, 1918.

The Hon. GEORGE E. CHAMBERLAIN.

Chairman Senate Committee on Military Affairs, Washington, D. C.

MY DEAR SIR: While I was testifying yesterday before your committee I was asked whether the specifications for woolen garments for the enlisted men of the Navy had been recently amended so as to permit of the use of any shoddy, my answer being in the unqualified negative.

Since the completion of my testimony, an officer attached to the Bureau of Supplies and Accounts has called my attention to the fact that the specifications on the one item of overcoat cloth opened July 30, 1917, while adhering to the established prewar all-wool standard, contained the following alternate clause—under which alternate clause awards were made for overcoat cloth now being manufactured for the Navy (no offers being made at that time on the standard prewar specifications):

ALTERNATE BIDS.

"Bid A to be a composition of 65 per cent new wool, one-half blood noils or reworked wool. To be stock dyed. To be a Melton finish."

Subject to tensile strength requirements as follows:

"Cloth constructed of alternate material shall be capable of sustaining a strain of not less than 55 pounds to the inch of warp and 50 pounds to the inch of filling."

My purpose in sending this letter is, of course, that your committee may be in possession of all the facts known to me, further particulars in detail being gladly furnished either by letter or in person should you so desire.

Very respectfully,

S. M. MCGOWAN,
Paymaster General of the Navy.

As far as the wool blankets are concerned, I should like to state that the blanket specifications provide: Size, 58 by 84; color, white; warp, cotton; weight, 3½ pounds; filling, from 50 to 75 per cent wool, balance cotton, reworked wool, or shoddy. I wanted that in the record, Mr. Chairman, because of the unjust comparison between the Navy Department and the Army.

Mr. CALDWELL. Under whose jurisdiction in the War Department would the laying of the water pipes at Camp Mills come?

Gen. GOETHALS. That comes under the cantonment division of the Quartermaster Corps.

Mr. CALDWELL. Do you know how far under the ground they put the water pipes at Camp Mills?

Gen. GOETHALS. I have not any idea.

Mr. CALDWELL. Do you know whether or not those pipes are frozen?

Gen. GOETHALS. I presume they did freeze; I do not know.

TRANSPORTATION OF THE ARMY AND ITS SUPPLIES.

The CHAIRMAN. The next item is "Transportation of the Army and its supplies," and the amount you are asking for is \$809,532,025.72, and then you have a supplemental estimate for \$144,647,990, making the total you are asking for \$954,180,015.72.

Gen. SHARPE. Mr. Chairman, the total amount asked for in this bill is \$809,532,025.72. Then in a supplemental estimate we are asking for \$144,647,990, or a total of \$954,180,015.72.

There was appropriated for last year, under the act of May 12, 1917, \$16,000,000, and under the deficiency act of June 15, \$249,672,454,

and under the deficiency act of October 6, \$375,000,000, making the total appropriated for this year \$612,963,745.42.

I would like to submit, Mr. Chairman, a table showing an analysis of the various items of the appropriations made for last year, and I would also like to submit the notes explanatory of those items.

The CHAIRMAN. Have you the figures to show how much of the appropriation made last year has been spent up to date?

Gen. SHARPE. We have not got that, recently. I sent for those figures but they have not been able to complete them in the Finance and Accounting Division. I will have that inserted in the record also, showing the amount expended in 1917 and making a comparison with the expenditures of previous years.

The CHAIRMAN. How do you account for the supplemental estimate of \$144,647,990?

Gen. SHARPE. The estimate was made for an army of 1,612,245 men and 100,000 officers, making a total of 1,712,245 men and officers, and then the supplemental estimate was to bring that up--

The CHAIRMAN. You say 1,712,245?

Gen. SHARPE. Yes, sir; that includes both officers and men. Then a supplemental estimate was made to cover the increases that would be involved for an army of 3,000,000 men, for all such items as would take six months or more to supply.

The CHAIRMAN. That would include what under this item?

Gen. SHARPE. That is for motor trucks, harness, carts, wagons, and pack rigging.

The CHAIRMAN. I have been told that in the transportation of motor trucks to France shipments have been made of parts and other parts have been left behind, so that it was weeks afterwards before the complete outfit was there. Is there anything in that?

Gen. SHARPE. Gen. Baker can tell you about that.

The CHAIRMAN. What was the reason for that?

Gen. BAKER. I only know of one instance, early in the procedure, in which a supply of trucks was sent over, and the bodies were sent from another port, practically at the same time. The ships arrived separately and in separate convoys. Motor trucks, however, go over complete, right along, and their parts accompany the trucks.

The CHAIRMAN. There was one instance of that kind which occurred, due to the fact that the different parts were shipped from different points?

Gen. BAKER. Yes, sir.

Mr. GARRETT. But you are not making that kind of shipments any more?

Gen. BAKER. No; that was were early in the procedure, and it happened at a time—I only know of it incidentally. I was not in the country at the time; I was in France, myself.

Mr. KAHN. Have you standardized your motor truck?

Gen. SHARPE. Yes, sir. I would like to say in reference to that that is a work that has been going on in the department for five years. It is a work which I feel particularly proud of, because it has been undertaken by the Quartermaster's Department.

I am glad to have an opportunity to make a statement in reference to it, and I can speak very frankly about this, because there is nothing egotistical about the matter. The English say it is the biggest piece of work that has been done in this war. It has resulted in the

standardization of all the motor parts, so that they are now interchangeable, and it does not require an enormous number of spare parts to be carried on hand for each of the different makes of motor trucks that you may have. The work has been accomplished in a marvelous way.

The very best and ablest motor engineers have come to Washington and have volunteered their services. In many cases they represent firms who control very valuable patents, which are their stock in trade. These patents have been placed at the disposal of the Government.

Mr. KAHN. Are you paying anything for the use of those patents?

Gen. SHARPE. No, sir.

Mr. KAHN. They were given voluntarily to the Government?

Gen. SHARPE. Yes, sir. The patents were placed at the disposal of the Government, and men representing the different firms controlling these patents, which comprise their trade secrets, and which are of the highest value to them, commercially, talked with other men, who are competitors of theirs, along practically the same line, and we have evolved various parts, combining the best features of those patents, and in some cases making up entirely new things.

What has been done is more important than anything which has ever been done in the motor business heretofore.

I speak of this frankly, because there is nothing personal about it. Credit for that work is due to Gen. Baker, to Col. Drake, to Maj. Orton, and to Capt. Brittain, and to Mr. Christian Girl, who is down here, and who is recognized to be the highest authority in the country on production, and who has the most wonderful detailed information with regard to the manufacture of all the different parts of the motor truck business. Col. Frailey also assisted in the matter.

These officers have really developed it, with the encouragement and assistance of all the civilians.

Through Mr. Christian Girl we got in touch with a great many of the people interested in the business, and through Maj. Orton, who is dean of the scientific department of the Ohio State University, we were able to get these various expert men, than whom there are no better in this country, to come on here and give their services to the Government, working all day, and almost all night, until 2 o'clock at night, night after night.

As an illustration of what that work is, I want to state that in the development of type B truck, which is a 3-ton truck, there were 10,000 drawings prepared. They had to be modified and corrected. Each type of truck represents, as I understand it, about 4,000 drawings, and so you see what had to be done in the original development of this type of truck.

We had to produce more than were necessary, and they had to discuss it, and then finally they had a complete set for each type of truck.

There must be an accurate list kept of every one of those we have prepared, and of the parties to whom these drawings have been sent with the absolute knowledge that they very latest approved drawing has been sent to them. That, itself, is a considerable piece of work.

I can give you that general statement in regard to it, and I would like you to call on either Gen. Baker or Col. Drake for the more detailed information about it. I can state, however, that after

having gotten this approved by the Secretary of War, we found that there was opposition from some of the part makers who did not care to go into this standardization, and I asked the Secretary to favor the continuance of the development of that truck, which he said he would do, and he backed us up in the matter, so that the opposition which had been made was not possible to divert it, or to hinder the perfection of the plan. The people who opposed it said we could not get the parts made, and we could not get them delivered. In refutation of that, we had a standardized truck here on October 10.

Mr. KAHN. How many sizes have you of those motor trucks?

Gen. SHARPE. There are three sizes, A, B, and AA. The A truck, a ton and a half-truck, and the AA truck is a $\frac{3}{4}$ -ton truck, and the B is a 3-ton truck, which really runs up to almost 5 tons, I believe.

Mr. KAHN. How many trucks are there in a truck company?

Gen. SHARPE. There are 33 in a section.

Mr. KAHN. How many of these companies have you organized, so far?

Gen. SHARPE. Those trucks were delivered on October 10. They were tried out thoroughly here with road tests of all sorts. Those were sample trucks made by hand only. Then we commenced on the development of the manufacture of the parts, and they have delivered a number of trucks which have been run overland down from Detroit to Baltimore, to demonstrate the capacity of the truck. Every one of those trucks arrived except one, which was run into by a railroad train.

There have been practically no defects found in any of them, although there was in one case a little defect found in the differential, and that was due to the fact that the differential had not been opened and not been properly packed with grease. Gen. Baker or Col. Drake can give you all the details in reference to those motor trucks.

Mr. TILSON. How nearly has the standardized truck been reduced to machine production? You say those that were made were hand finished.

Gen. SHARPE. The first five were reported running yesterday.

Mr. TILSON. Machine made?

Gen. BAKER. Machine made, and with the tools.

Mr. TILSON. There is one other question I would like to ask, as to how far in the selection of the different parts of the machine you have based that selection on actual experience or experiments in the field? In Arizona, in 1916, we had a number of companies there, and I know that we had next to my own camp different companies with different kinds of trucks. They were run under the same conditions, doing exactly the same kind of work. Did you utilize such experience as that as a basis for figuring on the relative merits of the different trucks and the different parts which you put into the standardized truck?

Gen. BAKER. Absolutely so. Every engineer who was associated with us worked on the standardized truck, and that is the experience that produced the standardized truck.

The great confusion in obtaining spare parts there, and the great confusion that exists now all throughout the western front, not only

with us, but with the people we are opposing, is what led to this standardization.

I can say, very briefly, that the beginning of this standardization occurred five years ago, when Gen. Aleshire was Quartermaster General. He was very pronounced in his desire to procure a standard truck for the military service. It was a very difficult matter to make the manufacturers or engineers or parts makers believe in that sort of enterprise at that time, because the total number of trucks we were buying in those days amounted to only ten or a dozen a year. Finally, when we got to a point where the Government owned as many as 30 trucks, we were very proud of ourselves. They were more or less of different varieties, and they had the tests, such as Col. Tilson just spoke of, and we tried out the various kinds of trucks.

This work went on, and gradually we induced the manufacturers to standardize certain things, like the tires. When we started, all the parts, the wheels, the tires, and the tread, and other features of the machines were utterly different. Eventually, we got the size of the wheels the same, and the size of the tires the same, and the tread the same, and then we got the same number of speeds and the same place for the chauffeur to sit, with his hand coming to the same gears in the same place. Those things were not easy to attain, because each manufacturer was pursuing his own course, and naturally did not like to change, because it cost him in each instance many thousands of dollars, and he thought he had the best thing procurable, and, at any rate, he had something that was very salable.

As I say, there was a gradual evolution until in the spring of 1916, we had what we considered a pretty fair set of specifications, and we had consulted the manufacturers and the engineers who were members of the Society of Automobile Engineers, and they were very generous in their consultation, but naturally each man desired to introduce the features of his own truck.

Finally, when war came, then everything came with a rush, and they were willing and very anxious and very much in earnest about having the Government produce a standard truck.

They came on to Washington, most of them serving without pay, engineers of the highest type in the country came down to contribute their services and their advice, and the conclusion of the matter was this series of trucks, which we call class B, a 3-ton truck, which is a heavy duty cargo truck, class A, which is a lighter truck, a 1½-ton truck, and very serviceable for lighter work. With that truck we proposed to put in two axles, so that it can be a slow-going machine for heavier service, and a fast-traveling machine for the lighter work, such as is required by the Signal Corps.

There is a little compromise in that. The AA truck is of a similar character, except it is still lighter, and was finally adopted after full consultation, not only with the various bureaus of the War Department that use trucks, but with the Navy Department and the Marine Corps and the Post Office Department, which will ultimately no doubt have large uses for just such a truck.

The plans for the heavy designed truck were completed on the 10th of September. In other words, in about 90 days that work was commenced and accomplished. Usually it takes 3 years in private enterprise to arrive at a conclusion like that in the matter of pro-

ducing a new type or model. Thirty days after that the first trucks were delivered, and delivered under their own power, and they have been run every day since, under close observation by the engineering section on the work, which has given them every test that they can think of giving to a truck, and they have stood them all.

Mr. QUIN. You say 30 days after that the first trucks were delivered: what date was that?

Gen. BAKER. That was on the 10th day of October. The Secretary of War and the President of the United States did the department the honor to receive those trucks.

Mr. ANTHONY. How many of those standardized trucks have you now?

Gen. BAKER. There are five that came through production yesterday.

Mr. ANTHONY. As a matter of fact, the Army is not now supplied with the standardized trucks?

Gen. BAKER. Those that are now supplied are not this standardized type; they are a modified standard type of machine which I endeavored to describe to you at the beginning. That is, they are not a hodgepodge of trucks, and they have certain standard features.

Mr. ANTHONY. How many different varieties of trucks have you sent to France?

Gen. BAKER. Four.

Mr. KAHN. I suppose you will replace them gradually by the standardized trucks?

Gen. BAKER. The plan is, that just as fast as these trucks come through they will be sent to France and placed in the trains there. Those that are in the trains and are not entirely satisfactory will be withdrawn and put on the line of communication and about the depots, and at places where the repairs can be easily made, and where they can be most easily repaired.

Mr. KAHN. How many factories will be turning out the standardized truck?

Gen. BAKER. For all the parts and assemblies, and everything there is in connection with the truck, at least 125 factories are engaged on that now.

Mr. KAHN. The reason I asked that question is because you said it will be six months before you can get them in any quantity.

Gen. SHARPE. Oh, no.

Mr. KAHN. I understood Gen. Sharpe to say it would require six months to supply the trucks. Did I misunderstand you? I think you said the motor trucks, carts, wagons, harness, and pack rigging would take six months to supply.

Gen. SHARPE. Those are the articles which I said would take time to deliver, which would take approximately six months or longer to deliver. They authorized us to increase our estimates for those items up to the requirements of 3,000,000 men. I did not say would take us that length of time to get the trucks.

Gen. BAKER. I think what Gen. Sharpe had in mind was that to start afresh production of articles of that character and let new contracts, after the appropriations become available would require six months to get the production through. But these trucks are now in production, and the contracts have all been let.

Gen. SHARPE. We must place the orders to allow them to continue.

Mr. KAHN. I have received letters myself, and I have seen letters to others that show that conditions in France are very bad, and we have got to speed up in every direction, and what I wanted to find out was whether the entire productive capacity of this country was already at work on these very items that you will need.

Gen. SHARPE. Yes, sir; it is at work, and it is to continue at work to get those deliveries.

Mr. KAHN. You want that appropriation in order to get these deliveries on time?

Gen. SHARPE. Yes, sir.

Mr. KAHN. Have you a standardized engine, too?

Gen. BAKER. Every item is standardized.

Mr. KAHN. Is the engine on the lines of the Liberty motor, something like that?

Gen. BAKER. It is quite a different motor. The Liberty motor is an extremely high-power motor, and of very light weight. There was no necessity for getting light weight in this motor, but those who are authorized to speak are very highly pleased with the motor of this truck.

Mr. KAHN. Your testimony would indicate that not only the War Department and the Navy Department are going to have these trucks, but also the Post Office Department.

Gen. BAKER. That is the lighter truck.

Mr. KAHN. It is one of these standardized types?

Gen. BAKER. Yes, sir.

Mr. KAHN. In view of that fact, do you not think that if it were possible to get other people into the business of producing or making them for the Government, it would be a good thing for us in order to hurry up this matter?

Gen. SHARPE. As I understand it, Mr. Kahn, all the parts makers practically that can be secured are engaged in making these parts. It is simply then a question of assembling, and we can get any number of people to assemble. We had an offer from some people out in Detroit who wanted to start an enormous factory there for the purpose of practically assembling all the trucks we could get, but we did not accept that because we do not care to limit the possible output by depending upon one corporation, no matter how large it is.

Mr. KAHN. What I have in mind is this: When the war broke out and the English found what great quantities of material it would require in every direction, they immediately made a survey of the manufacturing plants in Great Britain. They found that plants that were manufacturing a certain commodity which was used in peace times could be equipped without much cost or delay for the purpose of manufacturing war material of various kinds. Now, I think we can do the same thing in this country.

Gen. SHARPE. That is the work which Mr. Christian Gil has undertaken in this connection.

Mr. KAHN. You think he now has all the activities in the manufacture of motor trucks and parts of motor trucks in this country that could be pressed into the service of making those things under operation?

Gen. SHARPE. So I understand, sir.

Gen. BAKER. It might be possible to reach out and get others, Mr. Kahn, but, as a matter of fact, there has been such a falling off in the light motor car trade that all of those people are coming to our production department constantly and asking to be allowed to make certain things in connection with that work.

Mr. KAHN. Are you taking advantage of those offers so far as you can?

Gen. BAKER. Very generally. It is shown by the fact that 125 concerns are engaged in that production.

Mr. TILSON. Have you taken any steps to go further and try to standardize the private users of trucks, realizing that there may come a time when we will need a great deal more trucks than we have or can immediately make; and on the other hand that this war might end soon, and that we might be glad to have our trucks used either by the Post Office Department or by private individuals—that is, the great surplus number of trucks? Have any steps been taken toward getting standardization, as far as possible of the private users of this kind of a truck.

Gen. BAKER. The engineers who were engaged in the designing of this truck and the manufacturers who were engaged in the production of it expressed to me the view that these trucks will be of very general use after the conclusion of the war, and, in fact, to such an extent that certain very high class manufacturers of trucks are rather anxious lest their particular products may meet with a degree of competition that will be embarrassing, and they are all very anxious to produce, and they are all engaged, practically every one of them, in the production of this truck, complete, or parts of it.

Mr. KAHN. In case our engineers in France do not build the railroad systems that we will have to build in order to get our troops rapidly, would it be practicable to carry troops in those trucks? The roads over there are supposed to be among the best in the world.

Gen. SHARPE. There are 600 miles of double-tracked railroad.

Mr. KAHN. That we have now?

Gen. SHARPE. That we have to construct.

Mr. KAHN. That is what I was asking, whether possibly by having relays of trucks along the road, it would be possible to transport the men to the front in that way.

One of the officers spoke to me when I was on the Mexican border a year ago, one of the general officers, and told me that in his opinion it was entirely feasible to transport troops in the trucks, and I would like to have your opinion in regard to that.

Gen. SHARPE. That is what saved Paris, the sending out of troops in omnibuses and trucks, all of them that they could collect.

Mr. KAHN. They sent them in everything they could get their hands on. Do you think it would be practicable for our Army to transport the troops for some considerable distance toward the front in these trucks?

Gen. GOETHALS. It would be a question of the trucks and the roads. While the roads were previously good, they have not had any maintenance in the last three years. I think it would be easier to march the men over the 600 miles than to carry them in motor trucks.

Mr. CALDWELL. Another difficulty would be, it seems to me, that they are in so many different factories that the breaking down of one would delay all the others.

Gen. BAKER. I hope we will have little of that breaking down.

Mr. CALDWELL. You do not think you have made an unbreakable one?

Gen. BAKER. No; but we have made a good truck, unless our engineers are all wrong, and I do not believe they are.

Mr. GARRETT. I understood you to say you have 125 factories making these various parts.

Gen. BAKER. Yes, sir.

Mr. GARRETT. Each part is a vital part, I take it, or a necessary part.

Gen. BAKER. Every part is a necessary part.

Mr. GARRETT. With that many concerns making the different parts, suppose one of that number of 125 factories, any number of them from one to any other given number should fail to come up with their part, what position would you find yourself in?

Gen. BAKER. That is why we have the large number of those factories. Of those making springs, there will probably be three or four. The engine is being made in four different factories, and the axle in three different factories. In fact, we could only find three factories that could make the axle. They are all specialists.

Mr. GARRETT. There is more than one factory making each part?

Gen. BAKER. That is one of the first elements we considered. We would not give any one factory a contract to make all the various parts, in order to avoid strikes and fires, and all those incidental things that suggest themselves to your mind now. We have avoided that. It has been very skillfully done by our production people. It has been put in their hands, and they are people who have been engaged in this business all their lives.

Mr. GARRETT. It is almost beyond the range of human probability, or even possibility, that there will be a tie-up in this work because of a want of parts?

Gen. BAKER. I can not conceive of it, not even on account of any difficulties with the railroads, because we are running the trucks overland.

Mr. CALDWELL. How many do you calculate you can make in a year, or in six months, complete, set up and running?

Gen. BAKER. We expect in the month of March to make anywhere from 3,000, up. This month we are just coming into production, and we will make a minimum number. Next month there will be a larger number produced, and in the month of March from 3,000, up.

Mr. CALDWELL. What do you think will be the maximum production which you will require?

Gen. BAKER. That we will require?

Mr. CALDWELL. For an army of 3,000,000 men.

Gen. BAKER. For an army of 3,000,000 men we would require 60,000 trucks.

Mr. CALDWELL. How long will it take you to get those 60,000 trucks?

Gen. BAKER. I should say six months from the time we start the production. In fact, we would get the trucks under the new conditions much faster than we would get the army.

Mr. KAHN. I would like to ask you some questions in reference to the subject of transports. How many vessels has the Quartermaster Department at this time operating as transports?

Gen. BAKER. One hundred and seven; that is, in the trans-Atlantic service. That is in addition to those operating on the Pacific.

Mr. KAHN. There are very few operating over there?

Gen. BAKER. Yes.

Mr. KAHN. How many have you there?

Gen. BAKER. Nine all told, and those operating in the Philippines, six, and that includes one between New York and Panama.

Mr. KAHN. Of course, the question of the necessary number of ships is a very serious one.

Gen. BAKER. It is a very serious one.

Mr. KAHN. Have you taken over all the merchant vessels in the Pacific for the transportation of troops?

Gen. BAKER. That is a matter that we present to the Shipping Board. They are the people who control the merchant ships, and it is their duty, under the law, to requisition such vessels, and we have done that.

Mr. KAHN. You have been working in entire harmony with the Shipping Board?

Gen. BAKER. In daily association with the Shipping Board.

Gen. SHARPE. You asked a question a moment ago about the number of motor trucks being delivered. There will be 21,008, and that includes 10,000 of the standardized B type trucks, which have been ordered for delivery, and they will be completed by June 30.

Mr. CALDWELL. That would be approximately enough trucks for an Army of about 1,000,000?

Gen. BAKER. Yes, sir.

Mr. CALDWELL. How are you sending these trucks over? Are you sending them over all set up ready for work, or are they sent over in boxes knocked down, and assembled over there?

Gen. BAKER. There has been some difference of opinion as to how they should go over, whether or not they should be knocked down and boxed, or sent over standing. The ports from which they are sent were canvassed, and Col. Wilkus, who has recently returned from France, was interviewed with regard to the method of doing that, and the universal opinion of all those who expressed an opinion was that more space was saved by leaving the trucks standing and putting in forage in that part of the space around the trucks than by knocking them down and crating them or boxing them, and leaving considerable space there unoccupied.

Mr. CALDWELL. Then you have the advantage of saving the labor of that many more workers.

Gen. BAKER. You do not have to knock them down on this side at an expense for labor, and you do not have to put them up again on the other side at a further expense for labor.

Gen. SHARPE. It might be well to identify Col. Wilkus. He used to be the chief engineer of the New York Central Railroad, and he is now associated with Gen. Atterbury, on the line of communications in France, and is familiar with the conditions over there.

Mr. CALDWELL. This same standard truck you have adopted has not been adopted in all the other branches of the Army, has it?

Gen. BAKER. Only for cargo purposes. It is purely a cargo truck.

Mr. CALDWELL. Do they use exactly the same kind of cargo trucks in the Medical Department, and in the Aviation Section, and in the Ordnance Department?

Gen. BAKER. They will, as soon as we can supply them.

Mr. CALDWELL. The Ordnance Department has a different truck, have they not?

Gen. BAKER. For ammunition and tractor purposes.

Mr. CALDWELL. Was there any special reason why they should have a different kind of truck from the one you have for those two purposes?

Gen. BAKER. They had a four-wheel drive truck. A four-wheel drive truck is one to which the power can be applied on any one of the four wheels, and the result of it is that for certain parts of the machinery there are four times as many parts to get out of order. But they will be able to work out of a bad situation when this truck we have adopted begins to come through in production.

Mr. CALDWELL. The ammunition truck has to go to places that your truck does not have to go?

Gen. BAKER. Presumably so.

Mr. CALDWELL. Are they using a different kind of machine for the ambulances than the light truck you have?

Gen. BAKER. What we call our AA is the one which the Medical Corps is very anxious to get hold of for their ambulances, and as soon as we get them in production all of their ambulance chassis will be of that type, and they will construct on those chassis their own body, because they know what kind of an ambulance body should be used, but they consulted with our engineers, who give them all the aid they want.

Mr. CALDWELL. In the beginning they used various types of trucks, but that was because they had to have as many as they could get?

Gen. BAKER. They had to have as many as they could get, immediately. When I was in France on one of the fronts one of the officers connected with the mechanical transport branch of the English Army told me that one factory in Great Britain was producing 17 different makes of trucks in the beginning. Of course, that worked out in a little while, so that it was reduced. That shows the extent to which they were limited in the matter of standardization.

Mr. CALDWELL. We will overcome all those mistakes?

Gen. BAKER. I hope so.

Mr. CALDWELL. How many different ports of embarkation have we from which we send our material and men?

Gen. BAKER. We have what we call two major ports. Altogether we have used 15, and we will continue to use them in the future, probably more extensively than in the past if we get the ships.

Mr. CALDWELL. At each of these major ports you have under construction great storage houses, or places of embarkation?

Gen. BAKER. Yes.

Mr. CALDWELL. There is one of those great storage places at one of the ports of embarkation. What board located that port?

Gen. BAKER. A board known as the storage board, of which Mr. Morris L. Cook, of the Council of National Defense, is the chairman.

Mr. CALDWELL. Was the Quartermaster Department represented on that board at all?

Gen. BAKER. No.

Mr. CALDWELL. How deep is the water running up to that storage place?

Gen. BAKER. It is not very deep.

Mr. CALDWELL. You can not transport stuff from this storage place with anything like the degree of facility with which it should be transported?

Gen. BAKER. Ships can not put in there.

Mr. CALDWELL. What are they going to do with that storage place?

Gen. BAKER. I have heard Gen. Goethals say he contemplates using it for interior distribution.

Mr. CALDWELL. Do you know what that storage plant cost?

Gen. BAKER. No; I do not.

Mr. CALDWELL. How big is it?

Gen. BAKER. Approximately 125 acres.

Mr. CALDWELL. The buildings are over the whole of it?

Gen. BAKER. A very large part of it; a portion of it will be known as open storage.

Mr. CALDWELL. Have you any figures that would show how long it would take to pump out the channel leading to those buildings, so that big ships or big cargoes could go up there?

Gen. BAKER. No. The cantonment division has charge of all those matters of construction, and they would have all that information regarding the cost and everything of that kind.

Mr. CALDWELL. Up to date have we been able to furnish Gen. Pershing with everything he has asked for without undue delay?

Gen. BAKER. Yes, we have. Of course, when we talk about undue delay, there has been some delay simply because we have not had the ships, and there have been enormous quantities of other things we have not been able to send all at once. But he gives an order of priority or preference, and that order is followed right along.

Mr. CALDWELL. General, I saw or heard a story to the effect that one of the ships leaving America was loaded with dressed beef, and that the ship was equipped with cold-storage facilities to take care of the beef, that it arrived safely in France, and then was not unloaded, but was returned to this country, and when it was returned to America on the way back they cut off the cold storage in order to save coal, and when the ship arrived home at an American port they found an enormous quantity of beef that never had been unloaded, and it was spoiled. That is a matter of common gossip, and I would like to have a record of what happened and the quantity of beef that was destroyed.

Gen. BAKER. My recollection is that there were 240 quarters, weighing approximately 150 pounds each, on one of the transports taken over from the German service and manned and operated by the Navy.

Capt. DALY. The value of that beef was about \$3,300. We can put the details into the hearings. We have the correspondence in reference to the matter.

Gen. SHARPE. It was not discovered until the vessel got back here at the American port. When the vessel arrived on the other side, it was supposed to have been unloaded. It was not unloaded, and they cut off the refrigeration in order to save coal, not knowing that the beef was in that compartment. When they arrived here they found that that quantity of beef was in there, and they got in com-

munication with the port of debarkation on the other side to find out why the beef was not unloaded. All we know is the fact that it did come back here and was spoiled.

Mr. CALDWELL. Was anyone punished for that?

Gen. SHARPE. I do not know. We are getting the reports now.

Gen. BAKER. I understand the Navy Department is investigating the matter.

Mr. CALDWELL. I also heard a story to the effect that certain pipe or rails sent from this side arrived on the other side, and that they claimed over there that it was not wanted, and then it was brought back, and was unloaded on the dock and stayed there two months, Gen. Pershing in the meantime sending cablegrams over here asking where it was, and the reply from this side being that it was in France. Do you remember any such incident as that?

Gen. BAKER. I do not know of any such incident that you recite. I do know of an instance where steel billets——

Mr. CALDWELL (interposing). That is it.

Gen. BAKER (continuing). Intended for the French Government were sent over and returned to this side in order to avoid the delay of taking out the French billets and putting in sand ballast on the other side, which, as Gen. Pershing explained, would have caused that particular ship to have missed the convoy back, and would have delayed that process to that extent. In that case it was necessary for Gen. Pershing to choose between two evils, and he choose what he regarded as the lesser one.

Mr. CALDWELL. Are they using the ordinary liners that go in and out of our ports here for the purpose of transporting any of our men or materials?

Gen. BAKER. Those that go under convoy.

Mr. CALDWELL. Those that do not go under convoy are not being used?

Gen. BAKER. No.

Mr. CALDWELL. Are there large steerage facilities in those that go under convoy?

Gen. BAKER. Yes.

Mr. CALDWELL. The idea is to put in as many of the men as we can on those ships?

Gen. BAKER. Yes.

Mr. CALDWELL. There are some questions in reference to horses I would like to ask.

Gen. SHARPE. Col. Fair can tell you about the horses.

Mr. CALDWELL. What is the method you are now pursuing in the matter of the purchase of horses?

Col. FAIR. We have a method of open-market purchase, approved by the Secretary of War, whereby we use the services of the reputable horse dealers in the country and their organizations to help us to secure the delivery of the animals at concentration points where our boards can inspect and buy those horses that meet the specifications.

The details of the method are these: We have been authorized to purchase a certain number of animals, horses and mules, of different classes, and assign to the purchasing officer in charge of each one of the war zones the number of animals to buy that we think is in accordance with the number that are in the zone to be drawn from. There are four zones, the eastern zone, the central zone, with head-

quarters at Kansas City, the southern zone, with a purchasing officer at Fort Reno, and the northwestern zone, including California, with a purchasing officer at Fort Keough.

The purchasing officer calls on the various dealers who offer to furnish animals, and requires them to state at what place they will deliver them and at what price they will furnish the different classes of animals required, 20 per cent of the animals to be bought directly from the farms. When these animals come in we take the animals from the man who offers them at the lowest price. A maximum price has been established, and if a man offers to furnish them above that price, we say his price is too high, and we can not consider it. Then the dealers who have furnished a large per cent of the animals make us an offer. It is like conducting a private business. They tell us where they propose to deliver the animals and at what rate, and then the purchasing quartermaster arranges, through his inspection boards, of which each purchasing officer has 12, to send one of these boards to the place where the dealers want to deliver the animals, there to inspect them to see whether they comply with the regulations.

From this point the animals which are purchased are shipped to one of the 33 remount depots to be conditioned and cared for.

Purchasing from the farmers is a pretty difficult proposition. If we had a large trained personnel, it would be very desirable to go out and try to buy from the farmers direct, but in the United States of America we have only been able to get 50 men from civil life who are qualified to buy horses and mules, and our organization is not large enough to take in the whole country. It would require a thousand different buyers in a thousand places, but the best we can do at the present time is to buy horses simultaneously in 50 different places.

In connection with the Department of Agriculture we have endeavored to instruct the farmer as to what kind of horses the Army needs and wants. The farmers as a general rule do not know what kind of horses the Army wants.

If the county agents can get together and tell the farmers what kind of horses the Army wants, and if we can get a carload of those horses together, and they are the kind of horses the Army wants, we can buy them from the farmers at a price which would give the farmers a reasonable profit.

The farmers know what the dealers are getting for the horses and that proposition has not worked out very successfully, because many of the farmers thought it was a chance to get rid of horses that could not be worked on the farms, while, as a matter of fact, we have got to have the best animals in the country.

There has been more trouble in the Northwest, in Minnesota and North and South Dakota, than anywhere else. It seems they were very desirous of selling their horses, and a lot of the dealers in that section, when they advertised to buy horses for delivery to the Government, advertised themselves as Government officials. We stopped that and quit dealing with men who did that. They got the farmers to bring the animals in, and the farmers had heard about the dealers getting \$140 for horses, and the dealers would only give them \$100, and that caused a lot of correspondence between us and a number of Congressmen from that section of the country, and that has been

explained to them, and in the purchase of animals in the future we propose to buy 20 per cent direct from the farmers, if possible.

Out of 750,000 animals purchased we have only been able to get 45,000 from the farmers direct by honestly attempting to buy from them. That is due to the fact that they do not understand the kind of animals that we need.

In connection with the purchase of animals for the Army it was our desire to establish in the country the proper idea as to the needs of the Army, both in the matter of riding horses and draft horses. We tried to combine with our purchasing operations a campaign of education in order to teach the farmers what we did not want, and not to sell their horses to the dealers who go throughout the country gathering up the horses.

Under the present methods, as now approved, the dealers, when we announce we are going to buy from the farmers say it will not do for you to pay the farmers the same money you are paying us, because when we buy up the horses and ship them to a central point we have no assurance that we are going to sell them to the Government, and when we do sell we have nothing left but the rejects, and we have them left on our hands.

So we found that the average cost of delivering a horse to the Government at one of our inspection points was \$20 on the average, and the Secretary approved the method of buying the animals direct from the farmers in various places throughout the country, and giving them \$20 a head less for the animals we buy from them, and the dealers get \$20 more, or as much less as they are willing to offer the animals for at the larger points provided for the inspection and reception of the animals.

In addition to providing these plants for inspection of animals, the dealers have to keep them in good sanitary condition so that going to a large plant to inspect and select the animals is a different proposition than sending out to a little country station away off for the inspection of 50 or 60 animals, and getting only 8 or 10 acceptable ones out of that lot.

Mr. CALDWELL. The difference in the price is the difference between the maximum allowed to the dealer and that allowed to the farmer?

Col. FAIR. The difference between the maximum allowed to the dealer and to the farmer.

Mr. CALDWELL. So that it might be you did not pay the dealer any more than an adjoining farmer?

Col. FAIR. It might be, in some cases.

Mr. CALDWELL. What percentage of the present requirements have you obtained?

Col. FAIR. We have in the Army of the United States 340,000 animals. We have obtained a little over 80 per cent of the number we are required to buy.

Mr. CALDWELL. If the Army is increased to 3,000,000 men, from your experience in this business do you think you will have any trouble in getting deliveries of the number of animals that will be needed?

Col. FAIR. We will not have any trouble in getting the horses, but we will have trouble in getting the mules. There is an interesting recommendation which has just been made regarding mules,

a recommendation that comes from France, that we substitute mules in the hauling of the batteries over there.

Mr. CALDWELL. What is the price you are paying for mules?

Col. FAIR. The maximum price that we are paying for pack mules is \$190 for lead mules and for wheel mules \$235. We buy them for a little less than that sometimes.

There is no use in increasing the price for these animals, because the farmer or the planter who wants a mule will pay more than the Government will pay, no matter what the price may be.

Mr. CALDWELL. You think we can get as many for that price as for a higher price?

Col. FAIR. I think we can get as many for that price as for a higher price.

Mr. CALDWELL. Do you think the use of the traction engine on the farms has had any appreciable effect on the price of horses and the supply of horses?

Col. FAIR. I do not think it has. According to current statistics there are 26,000,000 horses in the United States and 10,000,000 mules.

Mr. MORIN. In that connection, will not the use of the motor trucks do away with the necessity of using a good many of the mules in the Army?

Col. FAIR. The motor truck has its own specific function to perform in this war, and so has the animal. The number of animals required for use in connection with our military operations amounts to 1 for every 4 men, according to statistics. France has in her army 1,200,000 animals, and Great Britain has in France 800,000 animals.

Mr. MORIN. How do we expect or intend to furnish the spare parts for making repairs to the motor trucks we will have?

Gen. BAKER. As the trucks come through production, the spare parts will come with them. They are sent over, and with each division of the Army there will be a certain number of machine shops on wheels, and trailers. Those are standardized types of trucks, and they all have exactly the same tools and the same kinds of benches for that class of work, and they go forward with the trucks located at the places where the truck companies will be in operation.

In addition to that, there will be large special shops employing as many as 1,100 or 1,200 men. In each section there will be very thoroughly equipped shops, all equipped exactly alike, with the same tools, so that a man going from one shop to another will find the tools that he was trained on in the new shop.

Mr. MORIN. Will the employees of those shops be men in the military service?

Gen. BAKER. They will be men in the military service.

Mr. MORIN. Organized for that service?

Gen. BAKER. All organized in this country for that purpose and sent over in a body to the other side to take up that work.

Mr. MORIN. They will be organized in connection with the motor-truck service?

Gen. BAKER. Yes, sir. They will be men who have been engaged all their lives, practically, in that class of work.

Capt. DALY. There will be 1,136 men and 54 officers in each unit. They are organized as units.

The CHAIRMAN. For my own information, I wish you would explain to me what is the distinction between this item that involves the question of horses and mules, animals under transportation, and the similar item on page 42, for "horses for Cavalry, Artillery, Engineers, etc.,"

Gen. SHARPE. They have always carried those appropriations separately.

The CHAIRMAN. What is the distinction between the two appropriations?

Mr. KAHN. What is the distinction between the two items?

Capt. DALY. The animals in the Army transportation appropriation are considered as transportation animals, while the horses for the Cavalry, Artillery, and Engineers are mounts.

The CHAIRMAN. Then the item for horses for the Cavalry, Artillery, and Engineers would also involve the question of the purchase of the animals?

Capt. DALY. Yes; but it does not involve the purchase of mules, draft animals, or pack animals.

The CHAIRMAN. They come under the item of animals for transportation.

Capt. DALY. Yes, sir; they are considered as parts of transportation, while the animals in the other items are mounts. That is the distinction.

Gen. SHARPE. In the proposition I submitted last year to change the appropriations, it was the intention to segregate the animals, no matter for what purpose they were to be used, and put them all under one appropriation for animals.

Col. FAIR. I think the distinction here is, Mr. Chairman, that the horses for Cavalry, Artillery, and Engineers are riding horses, and the other animals are carriers.

Mr. ANTHONY. If I remember correctly, last year you had an item of \$80,000,000 for horses. I think that passed the House, and it went to the Senate, and somebody from your department admitted in answer to a question by Senator Weeks, that you did not need that much money, and the amount was considerably cut down.

Capt. DALY. It was cut to \$25,000,000. The first deficiency estimate was for \$75,000,000, and the appropriation of June 15 was based on the estimate submitted prior to that date, which was for \$75,000,000.

Mr. ANTHONY. This committee gave you what you wanted, and then the Senate cut it down?

Capt. DALY. It was cut to \$25,000,000.

Mr. ANTHONY. Did you spend all the \$25,000,000?

Capt. DALY. Yes, sir.

Mr. ANTHONY. Did you find you needed more than that?

Capt. DALY. We asked for \$51,000,000 in the second deficiency estimate, on which the appropriation of October 6 was based, and the amount asked for in the estimate for October 6 added to the estimate of the appropriation made June 15 brought it to about the original estimate.

Mr. ANTHONY. So you really practically expended all you asked for originally?

Capt. DALY. It has not all been expended, but it all will be.

Mr. GREENE. Quite recently, in the plans for the transportation of the Army in the field, the theory was that motor-drawn vehicles would be used on the more distant lines of communication, but as the transportation proceeded into the interior lines horse-drawn vehicles would be substituted for motor-drawn vehicles. How has that worked out in the experience of the present war?

Gen. BAKER. That is the fashion in which it is operated at the present time.

Mr. GREENE. Has the proportion of the number of animal-drawn vehicles that would be employed, in their ratio to the motor-drawn vehicles, held up according to that theory?

Gen. BAKER. Very closely, except that there has been a considerably less number of motor vehicles placed on the lines of communication and in connection with the troops than was anticipated, because they find they can use those much more generously and save a lot of time, and make one body of troops do the work of two by the quick communication that is afforded in that way.

Mr. GREENE. The former theory was that with the heavier transportation which would be carried by the motor-drawn vehicles, they would necessarily have to resort to the highways, and when they once got into the terrain of action the lack of highways would necessitate the use of lighter horse-drawn vehicles.

Gen. BAKER. That is correct.

Mr. GREENE. Is that overcome in part by the laying of temporary tracks, with narrow-gauge carriers used as a means of conveyance?

Gen. BAKER. Only in a measure. The narrow-gauge railroad, the 40 and 60 centimeter roads are used in connection with the trenches, close up to the trenches, where they can be concealed from the enemy's fire or from his air guns. In fact they are used almost exclusively at night, and the lighter ones are used entirely as hand trucks, so that there will be no noise to attract the attention of the enemy at night. Even after that the animals are still required in practically the same numbers as before.

The motor trucks are utilized from the rail head into a point where they can connect up with the wagon, particularly back of the lines, where they can connect up immediately with the depots.

Mr. GREENE. So that after all, the general theory holds good, and the multiplication of more means of communication than was first contemplated has not destroyed the ratio at all.

Gen. BAKER. It is practically the same proportion. The fact of the matter is that the most essential need of the Army, in order to make it fairly available at any moment to the will of the commander is the means of transportation, and the more you multiply those means of transportation, the more active you make the Army, and the more effective you make it, and introducing one kind or type of truck does not mean that you can abandon some other type.

Mr. GREENE. So it comes back to the fact that you have not experienced any reason for decreasing the number of animals used because of the character and extension of the motor-drawn vehicles?

Gen. SHARPE. I think the necessity for the use of animals is increasing, due to the present method of warfare, because after a break is made forward from the trenches, the supplies have to go forward, and you can not possibly send motor trucks through that country, and you have to send the ammunition and supplies by pack mules. There

were some pictures in the papers recently showing mules in the mud almost up to their hips, trying to get out.

Mr. ANTHONY. You are practically duplicating your means of transportation?

Gen. SHARPE. Yes, sir.

Mr. ANTHONY. You have to utilize both motor and horse transportation?

Gen. SHARPE. Yes, sir.

Mr. ANTHONY. How are the ammunition trains equipped; both ways?

Gen. SHARPE. I think so.

Mr. ANTHONY. When you reach the scene of battle, the ammunition trains are of both horse and motor equipment?

Gen. SHARPE. I think so. Along the lines of communication—they are confining the motors mostly to the lines of communication. I would like to say in that connection that even when this war broke out they did not realize the extent to which motor transportation was going to be made use of.

Mr. ANTHONY. I would like to ask what percentage of the motor trucks which you bought at the commencement of the border campaign have gone into the junk pile, and what percentage are still in service.

Gen. BAKER. I do not believe——

Mr. ANTHONY (interposing). In other words, what is the life of the trucks you have been buying in the last three years?

Gen. BAKER. I do not believe that more than 2 per cent of those trucks have gone out of commission; not more than 3 or 4 per cent at the most.

Mr. ANTHONY. You find that the majority of the types you bought three years ago are serviceable now?

Gen. BAKER. Those were bought after a long period of experimentation, very slender experimentation, because we had only one or two trucks to buy, and before that we only had 30 trucks in the whole Army. Those were all of different makes, and we were constantly experimenting with those that we could get hold of.

Mr. ANTHONY. So you do not think there has been a waste in the money you have expended for the trucks you bought in the last three years?

Gen. BAKER. No. Those trucks are at work, and in the meantime the new trucks are being sent to France, so that none of the older trucks are going over there, and we expect every truck we send to France, unless it is hit by a shell, or something like that, to be running when the war ends.

Mr. McKENZIE. Mr. Chairman, I would like to ask Col. Fair one or two questions in reference to the horses. You buy all the horses for the Army?

Col. FAIR. Yes, sir.

Mr. McKENZIE. But for the Quartermaster's Department you simply buy heavy draft horses and mules?

Col. FAIR. Yes, sir.

Mr. McKENZIE. What is the maximum price you pay for horses?

Col. FAIR. For the heavy horses—that is, over 1,400 pounds, from 1,400 to 1,800 pounds—we pay \$230. For the draft horses, from 1,150

to 1,400 pounds, we pay \$190. For the Cavalry riding horses the maximum price is \$165.

Mr. McKENZIE. Would it be possible for you to put in the record the number of horses purchased in each of the different classes, and a statement in reference to the maximum price and the average price paid, so that we may have that information as to what the horses are costing?

Col. FAIR. Yes, sir; I think I have the notes of that here.

Mr. McKENZIE. You may put those in the record.

Mr. ANTHONY. I notice you bought some horses in France. From whom did you buy them?

Col. FAIR. They were bought from the French Government.

Mr. ANTHONY. Were they originally American horses, or were they native French horses?

Col. FAIR. They were partly horses sent from America, and partly French horses; mostly French horses.

Gen. SHARPE. I would like to explain about that. We sent with the first convoy the animals pertaining to that convoy and then Gen. Pershing stated that they could get their animals on the other side. That was the idea of economizing ship space. We attempted to buy them over there, and we found out later that we could not get them, and then there was a delay in the shipments from this country, and that also caused a delay in the equipping of some of the units later on, so that it was due to the change in the methods that the delay occurred.

The CHAIRMAN. I want to get this matter straight. As I understand it, under the item for transportation, the purchase of animals is involved only to the extent of pack animals.

Gen. SHARPE. Mules and pack animals.

Col. FAIR. And the heavy draft horses for sections of ammunition trains.

The CHAIRMAN. Then, under the separate item of horses for Cavalry, Field Artillery, and Engineers there is included the officers' mounts.

Gen. SHARPE. Yes, sir.

The CHAIRMAN. This first item is limited specifically to transportation of animals and draft animals?

Col. FAIR. Yes, sir.

Mr. GARRETT. But the general information you gave in regard to the animals applies to all the horses?

Col. FAIR. It applies to all.

Mr. SHALLENBERGER. Under which of these items are the most animals bought, Colonel, under the transportation item or under the item of horses for Cavalry, Field Artillery, and Engineers?

Col. FAIR. It will run about in the proportion of 60 to 40.

Gen. SHARPE. I had the tables separated.

Mr. SHALLENBERGER. I wanted to clear up a point you made as to the profit you allow the dealers, as compared to what the farmers get. You finally agreed that the dealer should have \$20 more than the farmers for the same horse, and you allow him that as a commission?

Col. FAIR. The maximum price that would be paid to the farmers when we go out to get the animals from the farmers direct is \$20 a head less than the maximum price we are permitted to pay the dealers

when they deliver them at their plants for inspection and the branding of the animals.

Mr. SHALLENBERGER. Does that price include transportation?

Col. FAIR. The dealer must pay for the transportation of the horses, and must pay his personnel for gathering up the horses and shipping them to a central point, and he is responsible for all the animals we get. That was arrived at after very careful consideration, and the county agents of the Department of Agriculture, who looked into it, were satisfied that that was a reasonable amount.

Mr. SHALLENBERGER. Is it not true that at one time you sent officers with the buyers, when the farmers brought the horses in, so that they could pass upon the horses before the dealers bought them?

Col. FAIR. The Bureau of Animal Industry of the Department of Agriculture agreed to send their men among the farmers to gather up the horses that they thought would meet our specifications, and after they had gotten them together and notified the central purchasing officer, who was a commissioned officer of the Quartermaster's Department, he went there with his veterinarians to inspect the horses they got together.

Mr. SHALLENBERGER. What I mean is this: Is it a fact that at one time you had officers who practically went with the buyers to certain places where the farmers brought the horses and the farmers sold the horses, and at the same time these men know that there were going to be no rejects?

Col. FAIR. That has not come to my notice.

Mr. SHALLENBERGER. I understand that that has been done, that after the farmer had sold his horse for \$100, later on the dealer received his full Government price for all the animals, and so the dealer took no chances whatever.

Col. FAIR. That is not contemplated in our system of purchasing.

Mr. SHALLENBERGER. I was told that it occurred, and that a great deal of money had been made by the dealers without their taking any risk whatever.

Col. FAIR. In what locality?

Mr. SHALLENBERGER. I was told that that occurred in North Dakota. If I have a carload of 20 horses, the price the Government would make to the dealer at Grand Island, where you have a purchasing agent, would be \$400 more than they would pay me for them at my home town.

Col. FAIR. If you had a carload of 20 horses, you would not know whether we would accept 20 or 5 of the carload.

Mr. SHALLENBERGER. Do you not send an inspector for every carload?

Col. FAIR. As a rule.

Mr. SHALLENBERGER. So that if my horses were inspected and passed, still I get \$20 less; is that true?

Col. FAIR. Yes.

Mr. SHALLENBERGER. If I ship cattle to Kansas City, which bring more money than horses, I am charged 50 cents commission for the selling of the steers, whereas you apparently allow the horse dealers \$20 commission for handling the horses.

Col. FAIR. It is a different proposition. When you ship steers to Kansas City on commission, those steers are not going to be rejected.

Mr. SHALLENBERGER. The steers go for some profit, the same as the horses. But I have a continuing price for the steers, do I not?

Col. FAIR. In the matter of purchasing horses, the man agrees to furnish 5,000 horses at a certain price, and also agrees to maintain at his own expense an inspection plant in proper sanitary condition. That is a big item of expense. We will stop inspecting those horses as soon as that plant is not in good condition. They must make arrangements to build the plant at their own expense, where they propose to show the animals to the Government agent, and it is not the same as buying cattle for shipment. They send buyers over the country to gather the horses in little lots, and finally they get them together into a central place, where they sell them to the Government. All that matter of expense in connection with that whole thing has been gone into, and it was thought that that was a reasonable profit to be allowed on that price.

Mr. SHALLENBERGER. I understood you to say you had been able to find only 50 men in the United States who could judge and buy these horses?

Col. FAIR. That is all we have commissioned for our service.

Mr. SHALLENBERGER. Does the average horsebuyer, who is buying horses have much difficulty in selecting a horse that will pass Government inspection? If a buyer goes out to buy 100 horses, he has the experience as to the kind of horses you are going to take. After he has had some experience, is it not true that most of the horses that he buys, because of his experience along that line, are going to be passed by the Government inspectors?

Col. FAIR. He learns, more or less, the kind of animals he can sell to the Government. But if a man goes out and buys animals from a farmer, he may have five or six horses. There may be two in the lot of five or six that the buyer knows will not be accepted, but the farmer says that he must take them all or none. Then he runs those up to see whether we are going to overlook the defects.

Of the horses accepted by the inspectors for the United States Army, I estimate that less than one-third have been accepted in the United States at the central stations.

Then there is the misunderstanding of the farmer as to what the Government requirements are. We wanted to try to teach him to raise horses that we could use in the Army. I have a list of the trips that were made by a board consisting of a captain of the Quartermaster Corps, a veterinary officer and three clerks, throughout the Northwest to try to get animals, and the number of trips made by those boards cost the Government thousands of dollars in attempting to deal with the farmers where they had no proper understanding of what was wanted. These boards had the task of securing the large number of animals needed in a short space of time.

Mr. SHALLENBERGER. There is a feeling that the Government has discouraged the purchase of horses from the farmers by allowing the dealers to concentrate large numbers of horses and sell them to the Government, and thereby make large amounts of money, because you have not wanted to go to the bother of having numerous collecting places, but preferred to buy them in large quantities.

Col. FAIR. That is not quite a fair statement of the case. We did not have an organization, and we had to utilize the organizations that the dealers had to get the animals together in large numbers.

Mr. GORDON. Did you not have facilities for keeping them?

Gen. SHARPE. The Government would have had to build plants to receive them.

Mr. MORIN. If the colonel will put in the record at this point a table showing the number of animals, the kind of animals, and the cost of the animals used in the transportation of the Army, and the maximum price paid for them, I think that will give us the information we desire.

Col. FAIR. I will do that.

Mr. SHALLENBERGER. The thing I had in mind was the way in which they buy the horses, and the way the dealer makes money out of this proposition.

Mr. GORDON. Gen. Sharpe, a recapitulation of the estimates for the fiscal year 1919 under the items entitled "Transportation of the Army and its supply," consists of 35 separate items, in which are enumerated all the different means of transportation by all conceivable means of conveyances. Among these items are two general items, one of a very general nature, Nos. 229 and 237, and for item No. 229 the appropriation last year was \$1,989,492, and the estimate under that item entitled "Other vehicles, purchase, hire, operation of, maintenance, and repair," is \$278,339,799.45.

Capt. DALY. The first figure you read was for the appropriation for the fiscal year 1918 in the Army appropriation act. The total amount we got under that item for the fiscal year 1918 was \$1,989,492.

The first table does not include the amounts appropriated under the same item in the acts of June 15 and October 6.

Mr. GORDON. What does it amount to, approximately?

Capt. DALY. Probably about \$183,000,000 or \$200,000,000. I do not recall exactly.

Mr. GORDON. Are not the figures available?

Capt. DALY. Yes, sir; I can put them in.

Mr. GORDON. The question I wish to ask concerning that item and also item 237, which is the item entitled "Charter of vessels," for which nothing appears to have been appropriated last year, and for which your estimate this year is \$341,435,000 is whether or not those items do not include a duplication of many of these other different items of transportation.

Gen. SHARPE. No, sir; they do not.

Capt. DALY. In these notes you have each of the items is explained, the purpose of each item.

Mr. GORDON. You have here a number of items for transportation of Signal Corps, of Engineering Corps, and of Medical Corps. Would not those items be duplicated in this \$341,000,000 for the charter of vessels.

Capt. DALY. No, sir; that is all Government transportation. The charter of vessels is for carrying the troops across the sea.

Mr. GORDON. How did you arrive at the item of \$331,000,000?

Capt. DALY. The number of vessels we contemplate using and the charter rate per ton.

Mr. GORDON. Is there any itemized statement of that?

Capt. DALY. Yes, sir; that is in the notes.

The CHAIRMAN. What is the charter rate per ton?

Capt. DALY. It is \$10 or \$12 a measured ton.

Mr. GORDON. How many troops do you figure for a ton?

Gen. BAKER. We figure 4½ tons to a man as an approximate amount.

Mr. GORDON. That is for transportation once.

Gen. BAKER. Yes; for each trip.

Mr. GORDON. This item of \$217,339,797, item No. 229, for "Other vehicles, purchase, hire, operation, and maintenance of"——

Gen. SHARPE (interposing). If you will look up item No. 229 you will see how it is divided up. It is divided into subdivisions from 229A to 229P, and you will find given there the amount for each item, and what each item is for. Then each of the subitems is explained under the note.

Mr. CALDWELL. The allowance of \$341,420,000 for charter of vessels covers how many vessels, and at what tonnage?

Gen. BAKER. It covers 175 ships of approximately 6,800 gross tons. We will need more than that if we go into the program that is now laid down.

Mr. CALDWELL. So that, if we have 3,000,000 men, how many ships would you have to have of that tonnage?

Gen. BAKER. Not less than 280 ships, instead of 175 ships, at a cost of \$492,660,000 instead of \$341,420,000.

Mr. CALDWELL. So that the gross amount would be \$422,660,000.

Gen. BAKER. That is the gross amount.

Mr. CALDWELL. So that that, with the extra allowance, amounting to \$809,532,000 plus \$132,637,990 would be enough for those two items?

Gen. BAKER. That is my understanding.

Mr. CALDWELL. I want to ask about the moving of the vessels. Are you organizing a department of skilled, experienced men in the matter of loading vessels?

Gen. BAKER. We have had them from the beginning, and we have used the stevedore units at the ports for that purpose.

Mr. CALDWELL. Are you making any additional development of that organization now?

Gen. BAKER. We are extending that organization as far as it is possible to do it. That is one of the things you have to be very careful about, in order not to interfere with what labor regards as its rights.

The CHAIRMAN. General, how much of a deficiency have you this year in the appropriation of \$612,963,745.42?

Gen. SHARPE. We have a deficiency of \$252,000,000.

The CHAIRMAN. So that you are really asking for about \$100,000,000 more than you got in that appropriation and the deficiency put together?

Gen. SHARPE. Yes, sir.

The CHAIRMAN. Have these provisos at the end of this item been carried all along?

Gen. SHARPE. The one commencing on page 40 reads:

And provided further, That hereafter, under such regulations as the Secretary of War may direct, the authorized horses of mounted officers ordered for duty over the seas or to Alaska may be transported at public expense to remount depots, or elsewhere in the United States for safe keeping during the absence of such officers.

I would like that legislation included in the bill for the reason that we found it utterly impossible to ship the officers' private mounts to

them. They got lost, and there is endless correspondence in reference to the matter, and we have authority to issue mounts to officers.

The CHAIRMAN. That is the only new item under that head?

Gen. SHARPE. Yes, sir.

Mr. DAVIDSON. I wanted to ask to what extent the four wheel drive trucks for the heavier work have been standardized, if at all?

Gen. BAKER. That is used by the Ordnance Department and the artillery now to a certain extent, for certain purposes, and more particularly for the purpose of tractor work. I understand those departments procure their own trucks. I understand they are using two types of the four wheel drive trucks.

Mr. DAVIDSON. Will you indicate about the cost of these different standardized trucks, if you can, class A, class B, and class AA, and put them in the record?

Gen. BAKER. I will put the cost in the record. The class A and class AA trucks are not yet in production. The contracts have not been let for them, so that we do not know what the cost will be.

Mr. KAHN. Can you approximate the cost of the others?

Gen. BAKER. Approximately \$3,334 apiece for the class B.

Mr. DAVIDSON. That is the heaviest truck?

Gen. BAKER. That is the heavy duty cargo truck. That is about a thousand dollars cheaper than the same truck is being produced for by high class makers now.

Mr. DAVIDSON. The lighter trucks would be less?

Gen. BAKER. Much less.

Mr. CALDWELL. How long do you think it will be before the lighter trucks are ready for delivery, or are in production?

Gen. BAKER. The samples that have been made are now being tested. It is undesirable to undertake to put those trucks in production until the engineers are completely satisfied with the tests, and I understand that in the class A tests they have proven satisfactory, and the Engineers are about to release the designs for production.

Mr. FIELDS. You make the different parts at different factories over the country?

Gen. BAKER. Yes.

Mr. FIELDS. Then you have one central plant, or one or more plants where you assemble the parts, and it is your plan to set up the trucks there, as I understand it, before you transport them?

Gen. BAKER. That is correct.

Mr. FIELDS. These parts come from the factory crated?

Gen. BAKER. Yes.

Mr. FIELDS. Would it not expedite the transportation of the trucks to assemble the different parts that go into the make up of the truck and ship them in crates to France and set the trucks up there? Would that not save a good deal?

Gen. BAKER. There would be a saving in transportation, but that matter was gone into very carefully by those in charge of the production, and the manufacturers have all advised against it.

It is a new product, and it is considered highly desirable to have it set up and put in operation, and tuned up. A truck, no matter how good it is, or how excellent it may be, will have to have its parts running before it can really be regarded as a truck in operation.

Mr. FIELDS. The reason for that, then, as I understand it, is that they want the truck inspected here before it goes abroad.

Gen. BAKER. Fully inspected, to make certain that absolutely every part is complete, and has been tuned up for operation.

Mr. FIELDS. With the thousands of parts being manufactured, if all those parts were shipped across the sea, and there was some part that did not operate correctly, could it not be replaced there as easily as here, and could not the general inspection plant be located there as well as here?

Gen. BAKER. The production section of the department advises strongly against that.

Mr. KAHN. I think the Quartermaster General's Department is following the same policy regarding the trucks that the Signal Corps is following out regarding aeroplanes. The parts are manufactured in different parts of the country and then sent to the Dayton field and put together there.

Mr. FIELDS. Have you only one place to assemble or inspect these trucks, or are there different places where you assemble the parts and set them up for inspection.

Gen. BAKER. There are 15 different manufacturers who are assembling the trucks.

Mr. FIELDS. And putting the trucks up complete?

Gen. BAKER. Putting the trucks up complete, so that we have 15 concerns who supply the complete truck.

Mr. FIELDS. That tends to expedite the deliveries of the trucks?

Gen. BAKER. It will do that, and will tend in the future to give us an opportunity for competition in the production.

Mr. McKENZIE. I would like to ask Gen. Sharpe a few more questions in regard to ocean transportation in this item of \$341,000,000.

How do you go about making your arrangements for ocean transportation? Do you make contracts with the steamship companies; and if so, about what proportion of the traffic is carried by privately owned vessels, and what proportion is carried by Government-owned transports?

Gen. SHARPE. There is none that is carried by Government-owned transports. We have no Government-owned transports between here and Europe. They are leased transports, and we get those through the Shipping Board, by payment of so much per ton in the charter.

Then, in addition to that, we have, or rather the Navy has, a number of vessels which they man, and which are operated for our service to carry the troops. That accounts for the vessels which are being used.

We take advantage of all possible opportunities to ship units over by the commercial liners, landing them in England. I do not recall any shipment of any troops going on a commercial liner to France.

Mr. McKENZIE. All that applies to supplies as well as men?

Gen. SHARPE. The supplies we have not shipped to England. We have shipped a limited quantity, but nothing to any great amount.

Mr. McKENZIE. Has the Government commandeered any vessels?

Gen. SHARPE. Yes, sir; the Shipping Board does that. We have no control over that. We get our vessels from the Shipping Board.

Mr. McKENZIE. In order to get full detailed information on that subject, we ought to have some of the members of the Shipping Board come before us.

Gen. SHARPE. Gen. Goethals, I think, can give you that information.

Mr. McKENZIE. What about the rates? Have the rates for ocean transportation gone up in the last two or three years, to any appreciable extent?

Gen. SHARPE. They have gone up considerably.

Mr. McKENZIE. Do you not make contracts for the payment of the freight? Does that not go through your office?

Gen. BAKER. The contract is drawn by the Shipping Board for their commandeered vessels, and the rate has been for a long time a matter of discussion between the owners of the vessels and the Shipping Board.

Only recently they have finally got their contract agreement, and that is the agreement that we have with all of those vessels that we procure by means of commandeering through the services of the Shipping Board.

There are a large number of vessels, as you know, German vessels that the Shipping Board took over, and some of them were remodeled.

Mr. McKENZIE. They are now operated by the Government?

Gen. BAKER. They are now operated by the Government, either by the Navy or by the Shipping Board crews. The Navy has taken over those as fast as they can arrange for the crews.

Mr. McKENZIE. Is there any competition between the steamship companies in competing for this business?

Gen. BAKER. There is no possible means of procuring anything of that character. The ships that carry our freight are all put in convoy, with naval gun crews on them, and sent over seas under the protection of naval ships. There are no commercial lines operating to the ports that we enter, except in one instance, and in that instance there are only occasional sailings of French steamers, and their cargo space is completely occupied by special cargos for the French Government. We can get no space on them. We can make no arrangements for any commercial shipments to go to France.

Mr. QUIN. I would like to know how the Quartermaster Department arrives at the price they pay for the several different parts of the trucks?

Gen. BAKER. That was done by a committee, after information gathered from as many sources as we could obtain it from, in which the manufacturers were asked to furnish us with estimates of the cost of that production.

For example, take the engine. All of the different features entering into the manufacture of the engine were listed by the production section of the Quartermaster Department and they were asked to make a computation as to what the cost of this production would be. Those desiring to make such an estimate did so.

After that, those figures were taken by a board which sat down and carefully scrutinized all of the estimates and worked them over and arrived at what might be appropriately called a composite price that was regarded as fair. This price was then offered to those people, to all who were in excess of the composite price, and it was left with the manufacturer to accept or decline. In some instances they declined to accept that price because they thought the composite price fixed by the board was lower than they could accomplish the work for with any profit, and because of the fact that it would

require them under the conditions named to operate at a loss. No bidder was given a price greater than that which he bid in his estimates.

Mr. QUIN. Then you feel that you are getting value received for every dollar you spend?

Gen. BAKER. We have had some very high compliments as to the manner in which we approached that subject. We had the best advice we knew how to get, and we determined the question after the most careful consideration of all features entering into it.

Mr. GORDON. General, when you get into this master production of the thousands of those machines, under the plan you have described, will not the cost of producing them be materially less than it is now?

Gen. BAKER. I anticipate that on every new lot of machines the price will be materially less.

Mr. GORDON. Will you enter into contract with these 125 different manufacturing establishments to manufacture these parts at so much per piece?

Gen. BAKER. That has been done for the first production. In future productions we will invite bids and then say to the successful bidder, "You will have to contract for so many trucks at such a price." He will then go to the different parts makers and procure the parts in the ordinary course of business. But in a new enterprise like this it would have been utterly impossible to have induced bidders, except for the most extravagant sums, to have gone into this production.

Mr. CRAGO. In the transportation of the Army to the border, and to these cantonments, there has been endless confusion, and lack in the train equipment that they had to use. Is your department working on any plan in the way of devising the construction of a standard type of car to make up a train which will be economically used in transporting the Army.

Gen. BAKER. No; not as you speak of it. That would be a very difficult undertaking. We have a standard kitchen car.

Mr. CRAGO. Are you developing that?

Gen. BAKER. And we have certain standards for hospital cars, and certain other standards of that character.

Mr. CRAGO. We will have to be using trains of these cars for a long time in moving men from the cantonments to the ports of embarkation and bringing them back.

Gen. BAKER. Yes.

Mr. CRAGO. In transporting the men to these different cantonments a great many of the trains were not provided with any means by which the men could get anything warm to eat. There was no proper provision made for that. Would it not be economical to work along the line of providing that equipment for the trains which will carry these men? That is going to be an immense job, and it seems to me it will be a practical thing if a type of car could be produced which would be properly suited for that service. Would it not be easy to devise a standard steel type of car for the men, which would be comfortable, with the same advantages that a Pullman car has, and then have a specially devised kitchen car and a baggage car that could be used for this purpose?

Gen. BAKER. That would be practical if we had the time in which to do it, and if the resources of the country were not already engaged to their utmost capacity in producing absolutely necessary equipment to move the traffic of the country.

Mr. CRAGO. Up to the present time all of the resources of the country have not been engaged. The railroads have not been buying equipment. If some such type of car as that could be worked out, I should think it would be well worth while to construct them.

Gen. SHARPE. I think it might be undertaken by the railroads. Take, for instance, the kitchen car which was developed. We wanted them to develop a kitchen car of the ordinary type of car, which was simply intended for the use of the kitchen. They would be willing to do that, if, in their opinion, there was a guaranteed justification for the expenditure. Now, it seems to me with the conditions as they now exist, with the general movement of troops, that they are in a position where they may be willing to undertake that construction.

Mr. CRAGO. That will be a continuous movement. There was one instance in which the men rigged up a sort of kitchen with an old-fashioned wood fire practically on the floor of the car, and that was the way they were doing their cooking in that car, and if they did not have wood enough to have that, they went two or three days without anything warm, except at places where they were met by some organization of women and given something warm by them. It seems to me that the health of the men and the care of the men going into the camps is as important a matter as anything we can consider.

Gen. SHARPE. It is, and all troop trains that are on the road during meal time are provided with kitchen cars.

Mr. CRAGO. I knew of numerous instances where the men were transported for several days without getting anything warm. It interferes with the operations of the railroads in their ordinary business to take their cars for that purpose, which they could use for other purposes.

Gen. BAKER. Your idea would be to have the Government build the cars and to be used for that purpose to save the other cars for the use of the railroad?

Mr. CRAGO. That would be my idea, if they can be developed, and I was wondering if there was any amount asked for in this bill that could be used for that purpose.

Gen. BAKER. There are no funds of that kind asked for in the bill.

Mr. CRAGO. Do you not think if that was worked out an item for that purpose in the bill would be approved?

Gen. BAKER. We have a plan for such a car, but that is a type of hospital car, and there are various uses that those cars may be applied to in the transportation of troops in the field.

(Whereupon the committee adjourned until Monday, January 14, 1918, at 10.30 o'clock a. m.)

HOUSE OF REPRESENTATIVES,
COMMITTEE ON MILITARY AFFAIRS,
Monday, January 14, 1918.

The committee this day met, Hon. S. Hubert Dent (chairman) presiding.

STATEMENT OF MAJ. GEN. HENRY G. SHARPE, QUARTER-MASTER GENERAL, ACCOMPANIED BY BRIG. GEN. I. W. LITTELL, COL. H. J. HIRSCH, MAJ. L. HARDEMAN, MAJ. R. C. MARSHALL, JR., AND CAPT. C. P. DALY, QUARTER-MASTER CORPS—Continued.

Mr. CALDWELL. General, in the item of transportation I notice, from items 202-A to 202-E, the estimate seems to be based on 700,000 officers and men. I would like you to explain that for the record.

Gen. SHARPE. That should be 1,700,000 men.
The details of the estimate are as follows:

Deficiency act June 15, 1917.....	\$221, 963, 745. 42
Deficiency act Oct. 6, 1917.....	375, 000, 000. 00
	<hr/> 596, 963, 745. 42

Recapitulation.

[Estimate, fiscal year 1919: Transportation of the Army and its supplies.]
PHILIPPINE ISLANDS AND THE UNITED STATES.

Item No.	Purpose.	Appropri- ation, fiscal year 1918.	Estimate for fiscal year 1919, Army at strength of 1,712,245 officers and men.		Total.	Esti- mate per capita, 1,712,245 officers and men.
			Current re- quirements.	New construc- tion.		
202a-e	Transportation of troops and impedimenta.....	\$1, 723, 700. 00	\$60, 550, 000. 00	.....	\$60, 550, 000. 00	\$35. 363
202f-g	Purchase, operation, maintenance, and repair of railroad equipment.....	25, 500. 000	429, 500. 00	.....	429, 500. 00	. 251
202h	Reimbursement of travel expenses, cadets.....	10, 000. 00	10, 000. 00	.....	10, 000. 00	. 006
203a	Transportation of signal stores.....	164, 000. 00	1, 020, 000. 00	.....	1, 020, 000. 00	. 596
203b	Transportation of engineering stores.....	77, 000. 00	510, 000. 00	.....	510, 000. 00	. 298
203c	Transportation of medical stores.....	59, 000. 00	170, 000. 00	.....	170, 000. 00	. 099
204	Transportation of baggage.....	285, 000. 00	1, 900, 000. 00	.....	1, 900, 000. 00	1. 109
205	Cost of packing and crating.....	135, 000. 00	287, 000. 00	.....	287, 000. 00	. 167
206	Transportation of recruits.....	1, 223, 820. 00	1, 520, 000. 00	.....	1, 520, 000. 00	. 888
207	Transportation of recruiting parties.....	33, 700. 00	60, 000. 00	.....	60, 000. 00	. 035
208	Transportation of applicants for enlistment....	342, 700. 00	420, 000. 00	.....	420, 000. 00	. 245
209	Travel allowance to enlisted men on discharge.	1, 600, 000. 00	3, 500, 000. 00	.....	3, 500, 000. 00	2. 044
210	Transportation of persons (military prisoners)....	28, 000. 00	160, 000. 00	.....	160, 000. 00	. 093
211	Transportation of supplies to the militia.....	.....	.....	.....	.....	.....
212	Transportation of the necessary agents and other employees.....	50, 000. 00	120, 000. 00	.....	120, 000. 00	. 070

Recapitulation—Continued.

PHILIPPINE ISLANDS AND THE UNITED STATES—Continued.

Item No.	Purpose.	Appropriation, fiscal year 1918.	Estimate for fiscal year 1919, Army at strength of 1,712,245 officers and men.		Total.	Estimate per capita, 1,712,245 officers and men.
			Current requirements.	New construction.		
213	Reimbursement of travel expenses, civilian employees.....	\$60,180.00	\$150,000.00	.....	\$150,000.00	\$0.087
214	Transportation of clothing and equipage.....	300,000.00	1,360,000.00	.....	1,360,000.00	.794
215	Transportation of other quartermaster's stores..	1,613,000.00	38,560,000.00	.....	38,560,000.00	22.522
216	Transportation of horse equipment.....	15,700.00	95,000.00	.....	95,000.00	.056
217	Transportation of ordnance ordnance stores, and small arms.....	810,000.00	26,000,000.00	.....	26,000,000.00	15.185
218	Wharfage.....	57,100.00	58,500.00	.....	58,500.00	.034
219	Tolls and ferriages.....	10,000.00	171,225.00	.....	171,225.00	.100
220	Transportation of funds..	7,600.00	120,000.00	.....	120,000.00	.070
221	Draft animals (purchase and hire of).....	75,000.00	17,457,455.00	.....	17,457,455.00	10.196
222	Pack animals (purchase and hire of).....	30,400.00	745,700.00	.....	745,700.00	.436
223	Harness (purchase of)....	155,133.00	4,723,433.00	.....	4,723,433.00	2.758
224	Harness (repair of).....	50,200.00	265,915.75	.....	265,915.75	.155
225	Wagons (purchase of)....	200,000.00	6,919,600.00	.....	6,919,600.00	4.041
226	Wagons (repair of).....	54,000.00	887,300.00	.....	887,300.00	.519
227	Carts (purchase and repair of).....	6,000.00	3,346,500.00	.....	3,346,500.00	1.954
228	Drays (purchase and repair of).....	700.00	.....	.....	.....	.....
229	Other vehicles (purchase, hire, operation, maintenance, and repair of).	1,989,492.00	278,339,797.45	.....	278,339,797.45	162.539
230	Drayage, cartage, and hauling.....	80,000.00	410,000.00	.....	410,000.00	.239
231	Teamsters.....	248,520.00	216,940.00	.....	216,940.00	.127
232	Other employees.....	1,142,900.00	1,139,368.65	.....	1,139,368.65	.665
233	Ships (purchase of).....	.....	.....	\$11,500,000.00	11,500,000.00	6.716
234	Sailing public transports.	2,055,510.00	2,785,765.00	.....	2,785,765.00	1.627
235	Boats (purchase, repair, and operation of).....	947,261.00	1,183,617.87	.....	1,183,617.87	.691
236	Other vessels (purchase, repair, and operation of).....	707,664.00	1,019,408.00	.....	1,019,408.00	.595
237	Charter of vessels.....	.....	341,420,000.00	.....	341,420,000.00	199.399
	Total.....	16,373,780.00	798,032,025.72	11,500,000.00	809,532,025.72	472.789

¹ This amount was estimated for but \$16,000,000 actually appropriated, the particular items reduced not being specified.

Recapitulation—Continued.

UNITED STATES.

Item No.	Purpose.	Appropriation, fiscal year 1918.	Estimate for fiscal year 1919, Army at strength of 1,712,245 officers and men.		Total.
			Current requirements.	New construction.	
202a-e	Transportation of troops and impedimenta.....	\$1,708,050.00	\$60,538,600.00	.....	\$60,538,600.00
202f-g	Purchase, operation, maintenance, and repair of railroad equipment....	16,500.00	409,000.00	.....	409,000.00
202h	Reimbursement travel expenses, cadets.....	10,000.00	10,000.00	.....	10,000.00
203a	Transportation of signal stores.....	162,800.00	1,019,800.00	.....	1,019,800.00
203b	Transportation of engineering stores..	76,400.00	509,900.00	.....	509,900.00
203c	Transportation of medical stores.....	57,000.00	168,500.00	.....	168,500.00
204	Transportation of baggage.....	281,760.00	1,898,700.00	.....	1,898,700.00
205	Cost of packing and crating.....	122,000.00	275,000.00	.....	275,000.00
206	Transportation of recruits.....	1,222,820.00	1,519,000.00	.....	1,519,000.00
207	Transportation of recruiting parties...	33,300.00	59,500.00	.....	59,500.00
208	Transportation of applicants for enlistment.....	342,700.00	420,000.00	.....	420,000.00
209	Travel allowances to enlisted men on discharge.....	1,555,000.00	3,460,000.00	.....	3,460,000.00
210	Transportation of persons (military prisoners).....	28,000.00	160,000.00	.....	160,000.00
211	Transportation of supplies to the militia.....	.....	.....	.....	.....
212	Transportation of the necessary agents and other employees.....	48,000.00	118,485.00	.....	118,485.00
213	Reimbursement of travel expenses, civilian employees.....	59,200.00	147,500.00	.....	147,500.00
214	Transportation of clothing and equipage.....	300,000.00	1,360,000.00	.....	1,360,000.00
215	Transportation of other quartermaster stores.....	1,453,000.00	38,415,000.00	.....	38,415,000.00
216	Transportation of horse equipment...	15,700.00	95,000.00	.....	95,000.00
217	Transportation of ordnance, ordnance stores, and small arms.....	802,500.00	25,995,000.00	.....	25,995,000.00
218	Wharfage.....	56,600.00	57,700.00	.....	57,700.00
219	Tolls and ferriages.....	9,750.00	170,975.00	.....	170,975.00
220	Transportation of funds.....	7,100.00	118,500.00	.....	118,500.00
221	Draft animals (purchase and hire of)..	40,600.00	17,433,455.00	.....	17,433,455.00
222	Pack animals (purchase and hire of)..	10,080.00	735,300.00	.....	735,300.00
223	Harness (purchase of).....	131,998.00	4,709,533.00	.....	4,709,533.00
224	Harness (repair of).....	42,200.00	257,915.75	.....	257,915.75
225	Wagons (purchase of).....	170,858.00	6,906,600.00	.....	6,906,600.00
226	Wagons (repair of).....	50,000.00	880,300.00	.....	880,300.00
227	Carts (purchase and repair of).....	4,000.00	3,345,000.00	.....	3,345,000.00
228	Drays (purchase and repair of).....	700.00	.....	.....	.....
229	Other vehicles (purchase, hire, operation, maintenance, and repair of)...	1,964,542.00	278,177,647.45	.....	278,177,647.45
230	Drayage, cartage, and hauling.....	80,000.00	410,000.00	.....	410,000.00
231	Teamsters.....	131,100.00	116,940.00	.....	116,940.00
232	Other employees.....	669,952.00	759,368.65	.....	759,368.65
233	Ships (purchase of).....	.....	.....	\$11,500,000.00	11,500,000.00
234	Sailing public transports.....	1,628,210.00	2,341,865.00	.....	2,341,865.00
235	Boats (purchase, repair, and operation of).....	618,500.00	799,617.87	.....	799,617.87
236	Other vessels (purchase, repair, and operation of).....	633,666.00	953,908.00	.....	953,908.00
237	Charter of vessels.....	.....	341,420,000.00	.....	341,420,000.00
	Total.....	14,544,586.00	796,173,610.72	11,500,000.00	807,673,610.72

Recapitulation—Continued.

PHILIPPINE ISLANDS.

Item No.	Purpose.	Appropriation, fiscal year 1918.	Estimate for fiscal year 1919, Army at strength of 1,712,243 officers and men.		Total.
			Current requirements.	New construction.	
202a-c	Transportation of troops and impedimenta.....	\$15,650	\$11,400	.....	\$11,400
202f-g	Purchase, operation, maintenance, and repair of railroad equipment.....	9,000	20,500	.....	20,500
203a	Transportation of signal stores.....	1,200	200	.....	200
203b	Transportation of engineering stores.....	600	100	.....	100
203c	Transportation of medical stores.....	2,000	1,500	.....	1,500
204	Transportation of baggage.....	3,240	1,300	.....	1,300
205	Cost of packing and crating.....	13,000	12,000	.....	12,000
206	Transportation of recruits.....	1,000	1,000	.....	1,000
207	Transportation of recruiting parties.....	400	500	.....	500
209	Travel allowance to enlisted men on discharge...	45,000	40,000	.....	40,000
212	Transportation of the necessary agents and other employees.....	2,000	1,515	.....	1,515
213	Reimbursement travel expenses, civilian employees.....	980	2,500	.....	2,500
215	Transportation of other quartermaster stores....	160,000	145,000	.....	145,000
217	Transportation of ordnance, ordnance stores, and small arms.....	7,500	5,000	.....	5,000
218	Wharfage.....	500	800	.....	800
219	Tolls and ferriages.....	250	250	.....	250
220	Transportation of funds.....	500	1,500	.....	1,500
221	Draft animals (purchase and hire of).....	34,400	24,000	.....	24,000
222	Pack animals (purchase and hire of).....	20,320	10,400	.....	10,400
223	Harness (purchase of).....	23,135	13,900	.....	13,900
224	Harness (repair of).....	8,000	8,000	.....	8,000
225	Wagons (purchase of).....	29,142	13,000	.....	13,000
226	Wagons (repair of).....	4,000	7,000	.....	7,000
227	Carts (purchase and repair of).....	2,000	1,500	.....	1,500
229	Other vehicles (purchase, hire, operation, maintenance and repair of).....	24,950	162,150	.....	162,150
231	Teamsters.....	117,420	100,000	.....	100,000
232	Other employees.....	472,948	380,000	.....	380,000
234	Sailing public transports.....	427,300	443,900	.....	443,900
235	Boats, purchase, repair, and operation of.....	328,761	384,000	.....	384,000
236	Other vessels, purchase, repair, and operation of..	73,998	65,500	.....	65,500
	Total.....	1,829,194	1,858,415	.....	1,858,415

AUGUST 21, 1917.

From: Quartermaster General.

To: The Surgeon General, United States Army.

Subject: Amount required for transportation of medical supplies, fiscal year 1919.

For the purpose of estimating the funds that will probably be required for transporting medical stores, fiscal year 1919, under item 202, appropriation "Transportation of the Army," it is requested that you please advise this office of the approximate amount of funds that will be required for the transportation of medical stores during said fiscal year. The per capita for this item, fiscal year 1917, under normal conditions was 0.349. The estimate should, it is thought, be based on the assumption that the country will be at war in the fiscal year 1919.

By authority of the Quartermaster General.

CHAS. P. DALY,
Captain, Military Storekeeper, Quartermaster Corps.
 (First indorsement.)

WAR DEPARTMENT,
 SURGEON GENERAL'S OFFICE,
 August 30, 1917.

The QUARTERMASTER GENERAL OF THE ARMY:

It is estimated that \$2,000,000 will be required for the transportation of medical supplies for the fiscal year 1919, this being based on the assumption that the country will be at war.

W. C. GORGAS,
Surgeon General, United States Army,
 By EDWIN P. WOLFE,
Lieutenant Colonel, Medical Corps.

AUGUST 21, 1917.

From: Quartermaster General.

To: Chief of Ordnance, United States Army.

Subject: Transportation, ordnance, ordnance stores, and small arms, fiscal year 1919.

For the purpose of estimating the funds that will be required during the fiscal year 1919 for "Transportation of ordnance, ordnance stores, and small arms," under item 217, appropriation "Transportation of the Army," it is requested that you please advise this office of the approximate amount that will be required for this purpose during said fiscal year.

The per capita cost under this item fiscal year 1917 was \$4.793.

The estimate should, it is thought, be based on the assumption that the country will be at war in the fiscal year 1919.

By authority of the Quartermaster General.

CHAS. P. DALY,
Captain, M. S., Quartermaster Corps.

[First indorsement.]

ORDNANCE OFFICE, SUPPLY DIVISION,
August 29, 1917.

The QUARTERMASTER GENERAL.

1. This office estimates that the average movement of ordnance, ordnance stores, and small arms for the fiscal year 1918-19 will be 500,000 tons per month.

2. It is estimated that the average mileage of each movement will be 500 miles and that the cost per ton will be \$10.

3. Based on these figures, the cost for transportation of ordnance, ordnance stores, and small arms for the fiscal year 1918-19 will be \$60,000,000.

WILLIAM CROZIER,
Brigadier General, Chief of Ordnance.

[Second indorsement.]

WAR DEPARTMENT,
QUARTERMASTER GENERAL'S OFFICE,
September 4, 1917.

To: The Transportation Division, for remark.

The amount submitted in the estimate for this purpose by the Transportation Division was \$2,690,555.

The prompt return of these papers is requested.

By authority of the Quartermaster General.

J. Q. A. BRETT,
First Lieutenant, United States Army.

SEPTEMBER 7, 1917.

Memorandum for the estimates branch:

Notation has been made of the report of the Chief of Ordnance in the first indorsement on these papers indicating that in the opinion of the Ordnance Department \$60,000,000 will be required for the transportation of ordnance, ordnance stores, and small arms during the fiscal year 1919. The estimate made by the transportation division was based on the same cost per mile, but the tonnage to be hauled is not placed at any such enormous figures as those now specified by the Ordnance Department.

It is understood, however, that adjustment has been made of the figures in the estimate before submitting the same to the Secretary of War, so as to provide for additional funds under this particular item.

C. B. DRAKE,
Major, Quartermaster Corps.

AUGUST 21, 1917.

111-1006-A-E.

Quartermaster General.

Chief of Engineers, United States Army.

Amount required for transporting engineer stores.

For the purpose of estimating the funds that will be required during the fiscal year 1919 for transporting "Engineer stores" under item 202, appropriation "Transportation of the Army" it is requested that you please advise this office of the approximate amount that will be required for this purpose during said fiscal year.

The per capita cost for this item, fiscal year 1917, under normal conditions was 0.456 cent.

The estimate should, it is thought, be based on the assumption that the country will be at war in the fiscal year 1919.

By authority of the Quartermaster General:

CHAS. P. DALY,
Captain M. S., Quartermaster Corps.

[First indorsement.]

OFFICE, CHIEF OF ENGINEERS,
THE GENERAL ENGINEER DEPOT OFFICER,
Washington, D. C., August 23, 1917.

For remark.

By command of the Chief of Engineers:

W. S. GRANT, JR.,
Major, Corps of Engineers.

[Second indorsement.]

GENERAL ENGINEER DEPOT,
1419 F STREET NW.,
Washington, D. C., August 31, 1917.

To the CHIEF OF ENGINEERS,
United States Army, Washington, D. C.

1. The following detailed estimate is given, based on the assumption that as an average condition during the fiscal year 1919, there will be 60 divisions in France and 60 divisions in the United States.

(a) Engineer equipment and supplies for one division, 300 tons. Assume that each division in France required 3 complete replacements per year, $3 \times 60 \times 100 = 18,000$ tons. Assume average rail haul in United States 750 miles, $750 \times 18,000 = 13,500,000$ ton miles, at \$0.01 per ton mile (machinery rate), \$135,000.

(b) Assume that each of 60 divisions in United States received one equipment per year, same rail haul. 6,000 tons, and 4,500,000 ton-miles, at \$0.01 per ton-mile (machinery rate), \$45,000.

(c) Lumber. Assume 30,000,000 board feet per month to be supplied from United States (see Maj. Barber's estimate of June 21, 1917, file 104059/47), 60 pounds per cubic foot, 300 miles average rail haul, 900,000 tons, and 270,000,000 ton-miles, at \$0.0072 per ton-mile, \$1,944,000.

(d) Railway material, equipment, and supplies. Assume 3,000 tons per day, 750 miles average rail haul, 1,095,000 tons, and 821,250,000 ton-miles, at \$0.01 per ton-mile (machinery rate), \$8,212,500.

(e) Miscellaneous material equipment and supplies for engineering operations in the field. Assume 6,000 tons per day, 750 miles average rail haul, 1,642,500 tons, 2,190,000 tons, and 1,642,500,000 ton-miles, at \$0.01 per ton-mile (machinery rate), \$16,425,000.

Grand totals, 4,209,000 tons; 2,741,750,000 ton-miles; \$26,761,500.

2. The above estimates are the best that can be furnished at this time on account of the great uncertainty as to what actual requirements will be. They should be interpreted as guesses only, with the understanding that even if the assumptions made as to the number of troops prove to be approximately correct, the estimates may not be correct without several hundred per cent. The estimates cover railroad transportation only from points of production to ports of embarkation in the United States. It is believed that with the details shown the Quartermaster General's office can estimate on water transportation better than this office.

W. H. ROSE,
Major, Corps of Engineers.

[Third indorsement.]

OFFICE CHIEF OF ENGINEERS,
September 8, 1917.

To the QUARTERMASTER GENERAL.

Returned, inviting attention to the preceding indorsements.

W. M. BLACK,
Chief of Engineers, United States Army.

By J. H. EARLE,
Major, Corps of Engineers.

Finance and accounting division.

Statement required by estimates branch under date of October 19, to be furnished on December 1, 1917. 111-1006-A-E.

Total payments and obligations under the items of rail and water transportation. (Detailed statement herewith)—

July 1, 1916, to June 30, 1917.....	\$16,021,219.45
For month of July, 1917.....	2,594,487.77
Total payments travel allowance to enlisted men in discharge July 1, 1916, to June 30, 1917.....	1,224,424.93

Item 202 (consolidated)—Transportation of the Army.

[Estimate fiscal year 1919, \$60,989,500.]

	United States.			Philippine Islands.			Grand total.
	Current re-quirements.	New con-struction.	Total.	Current require-ments.	New con-struction.	Total.	
Estimate.....	\$60,957,600.00	.....	\$60,957,600.00	\$31,900.00	.....	\$31,900.00	\$60,989,500.00
Appropriated fiscal year, 1918.....	1,728,050.00	\$6,500.00	1,734,550.00	24,650.00	.....	24,600.00	1,759,200.00
Expended fiscal year, 1917.....	4,080,280.23	.....	4,080,280.23	19,200.00	.....	19,200.00	4,099,480.23

REMARKS.

The estimate under this item provides for transportation of troops and their impedimenta and animals; purchase, operation, and maintenance of railroad equipment and reimbursement of travel expenses of cadets, as shown by subitems following:

Items.	Appropriation, 1918.	Estimate, 1919.
202a. Transportation of troops.....	\$1,414,700.00	350,257,038.00
202b. Transportation of impedimenta accompanying troops.....	153,000.00	6,054,800.00
202c. Public animals with troops changing station.....	85,000.00	3,329,823.00
202d. Horses of officers changing station.....	55,300.00	605,586.00
202e. Procurement of street-car tickets.....	16,200.00	302,693.00
202f. Purchase of railroad equipment.....	6,500.00	18,000.00
202g. Operation, etc., of railroad equipment.....	19,000.00	411,500.00
202h. Reimbursement travel expenses, cadets.....	10,000.00	10,000.00
Total.....	1,759,200.00	60,989,500.00

REMARKS.

United States.—The total of subitems 202a to 202e is based on approximately 700,000 officers and men at \$86.50 per capita.

Subitems 202f and 202g, amount \$429,500, is for purchase, operation, and maintenance of railroad equipment.

Subitem 202h, amount \$10,000, is the same as appropriated for 1918.

Philippine Islands.—The department authorities estimated \$31,900 as being required for the fiscal year 1919. No details were submitted as to the amount called for.

Item 202a.—Transportation of the Army, transportation of troops.

[Estimate fiscal year 1919, \$50,257,038.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$50,247,038.00	.....	\$50,247,038.00	\$10,000.00	.....	\$10,000.00	\$50,257,038.00
Appropriated fiscal year 1918.....	1,403,000.00	.....	1,403,000.00	11,200.00	.....	11,200.00	1,414,200.00
Expended fiscal year 1917.....	3,177,116.39	.....	3,177,116.39	12,000.00	.....	12,000.00	3,189,116.39

REMARKS.

The estimate under this item is for the cost of passenger transportation (including sleeping-car accommodations) for the Army, exclusive of civilian employees, which are estimated for under separate items of this estimate.

United States.—The total for this item, also items 202 b, c, d, and e, is based on approximately \$86.50 per capita for 700,000 officers and men.

Philippine Islands.—The department authorities estimated \$10,000 as being required for the fiscal year 1919. No details were submitted as to the amount called for.

Item 202b.—Transportation of the Army: Impedimenta and organization property accompanying troops changing station.

[Estimate fiscal year 1919, \$6,054,860.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$6,053,860.00	.....	\$6,053,860.00	\$1,000.00	.....	\$1,000.00	\$6,054,860.00
Appropriated fiscal year 1918.....	152,300.00	.....	152,300.00	700.00	.....	700.00	153,000.00
Expended fiscal year 1917.....	587,024.75	.....	587,024.75	800.00	.....	800.00	587,824.75

REMARKS.

United States.—The estimate under this item is for cost of transportation of impedimenta and organization property accompanying troops changing station. Under this head is included tentage, bedding, hardware, rope, lockers, mess chests, kitchen utensils, rations for use in transit and upon arrival, ranges, chinaware, tableware, clothing, horse equipment, office records, small-arms ammunition, wagons and spare parts, harness, saddlery, tools, forage for use in transit and upon arrival at destination. The total of this item, also items 202a-c-d and e, is based on approximately \$86.50 per capita for 700,000 officers and men.

Philippine Islands.—The department authorities estimated \$1,000 as being required for the fiscal year 1919. No details were submitted as to the amount called for.

Item 202c.—Transportation of the Army: Public animals with troops changing station.

[Estimate fiscal year 1919, \$3,329,823.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$3,329,623.00	.....	\$3,329,623.00	\$200.00	.....	\$200.00	\$3,329,823.00
Appropriated fiscal year 1918.....	83,500.00	.....	83,500.00	1,500.00	.....	1,500.00	85,000.00
Expended fiscal year 1917.....	101,159.73	.....	101,159.73	200.00	.....	200.00	101,359.73

REMARKS.

United States.—This item covers cost of transportation of all public animals accompanying troops changing station. The cost of transportation of these animals from place of purchase is paid from items 215b and 215c.

The total of this item, also items 202a, b, d, and e, is based on approximately \$86.50 per capita for 700,000 officers and men.

Philippine Islands.—The department authorities estimated \$200 as being required for the fiscal year 1919. No details were submitted as to the amount called for.

Item 202d.—Transportation of the Army: Horses of officers changing station.

[Estimate fiscal year 1919, \$605,586.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$605,386.00	.....	\$605,386.00	\$200.00	.....	\$200.00	\$605,586.00
Appropriated fiscal year 1918.....	55,050.00	.....	55,050.00	250.00	.....	250.00	55,300.00
Expended fiscal year 1917.....	56,053.99	.....	56,053.99	200.00	.....	200.00	56,253.99

REMARKS.

United States.—This item covers cost of transportation of the horses of mounted officers on authorized changes of station of such officers.

The total of this item, also items 202a, b, c, and e, is based on approximately \$86.50 per capita for 700,000 officers and men.

Philippine Islands.—The department authorities estimated \$200 as being required for the fiscal year 1919. No details were submitted as to the amount called for.

Item 202e.—Transportation of the Army: Procurement of street car tickets.

[Estimate fiscal year 1919, \$302,693.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New constructions.	Total.	Current requirements.	New constructions.	Total.	
Estimate.....	\$302,693.00	.....	\$302,693.00	.....	.....	.....	\$302,693.00
Appropriated fiscal year 1918.....	14,200.00	.....	14,200.00	\$2,000.00	.....	\$2,000.00	16,200.00
Expended fiscal year 1917.....	72,507.13	.....	72,507.13	.....	.....	.....	72,507.13

REMARKS.

United States.—Under the provisions of paragraph 1127, Army Regulations, 1913, street car tickets are furnished for the transportation of officers, enlisted men, and civilian employees in the transaction of public business when this form of transportation is preferable in convenience and cost to the supply of other transportation. They are not furnished to an officer traveling under mileage orders or to officers or others for travel between their homes and offices. From this item is also paid the cost of street car transportation of funeral escorts, when the distance is considered too great for marching, and also of movements of troops between railroad depots and posts under similar conditions.

The total of this item, also items 202a, b, c, and d, is based on approximately \$86.50 per capita for 700,000 officers and men.

Philippine Islands.—No estimate submitted by the department authorities.

Item 202f.—Transportation of the Army; purchase of railroad equipment.

[Estimate fiscal year 1919, \$9,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....				\$9,000.00		\$9,000.00	\$9,000.00
Appropriated fiscal year 1918.....	\$6,500.00		\$6,500.00				6,500.00
Expended fiscal year 1917.....	75,848.50		75,848.50				75,848.50

REMARKS.

United States.—No estimate is submitted for the fiscal year 1919.

Philippine Islands.—The amount estimated in this item by the department authorities is \$9,000. Nothing was allowed for the fiscal year 1918. The above is the sum estimated that will be required for the purchase of railroad equipment for all posts in the Philippine Department provided with this utility, and will cover the increase in equipment required such as has to be replaced. Railroads are now being operated at Fort Mills, Manila, and Camp Overton by steam and electricity. Railroads operated by man and animal power are maintained at Augur Barracks, Ludlow Barracks, and Pettit Barracks.

Item 202g.—Transportation of the Army: Operation, maintenance and repair of railroad equipment.

[Estimate fiscal year 1919, \$420,500.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$409,000.00		\$409,000.00	\$11,500.00		\$11,500.00	\$420,500.00
Appropriated fiscal year 1918.....	10,000.00		10,000.00	9,000.00		9,000.00	19,000.00
Expended fiscal year 1917.....	4,577.00		4,577.00	6,000.00		6,000.00	10,577.00

REMARKS.

United States.—The amount estimated for is required for repairs to the equipment at United States Disciplinary Barracks, Fort Leavenworth, Fort Levitt, Fort Hancock, Fort Dupont, Fort Monroe, Fort Morgan, etc., including operation and maintenance of the Hoboken Shore Railroad. There were reported on page 301 in the hearing on the Army appropriation bill, 1918, 80 locomotives, flat cars, box cars, dump cars, etc., on hand at the various posts to be kept in repair. In addition to this, the equipment

to be purchased during the fiscal year 1918 will add to repairs. It is believed that all the funds estimated for will be required to keep the equipment in proper repair; also maintain and operate the Hoboken Shore Railroad.

Philippine Islands.—\$11,500 is called for under this item by the department authorities. This is \$2,500 more than the estimate for the fiscal year 1918. The increase asked for over the estimate for 1918 is required to cover the advance in cost of materials and the increase in repairs made necessary due to age of the equipment.

Item 202h.—Transportation of the Army: Reimbursement of traveling expenses of newly appointed cadets to the United States Military Academy.

[Estimate fiscal year 1919, \$10,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$10,000.00	.....	\$10,000.00	.....	.....	.....	\$10,000.00
Appropriated fiscal year 1918..	10,000.00	.....	10,000.00	.....	.....	.....	10,000.00
Expended fiscal year 1917.....	5,992.74	.....	5,992.74	.....	.....	.....	5,992.74

REMARKS.

United States.—The estimate under this item is for reimbursement of cadets for traveling expenses from their homes to the United States Military Academy, West Point, N. Y., and includes railroad fares, sleeping-car accommodations, meals enroute, and transfer of baggage.

The estimate under this item is the same as the amount appropriated for 1918.

Philippine Islands.—No estimate submitted by the department authorities.

Item 203 (consolidated).—And its (the Army's) supplies.

[Estimate fiscal year 1919, \$1,700,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$1,698,200.00	.....	\$1,698,200.00	\$1,800.00	.....	\$1,800.00	\$1,700,000.00
Appropriated fiscal 1918.....	296,200.00	.....	296,200.00	3,800.00	.....	3,800.00	300,000.00
Expended fiscal 1917.....	521,129.32	.....	521,129.32	1,200.00	.....	1,200.00	522,329.32

REMARKS.

United States.—This item covers cost of transportation of signal, engineer, and medical stores for the Army, the cost of transportation of quartermaster stores being shown under items 214 and 215 and of ordnance stores under item 217.

The estimate under this item is based on approximately 169,820 tons, at \$10 per ton.

This item is subdivided under items 203 a, b, and c, as shown below:

No.	Item.	Appropriation, 1918.	Estimate, 1919.
203a	Transportation of signal stores.....	\$164,000.00	\$1,020,000.00
203b	Transportation of engineering stores.....	77,000.00	510,000.00
203c	Transportation of medical stores.....	59,000.00	170,000.00
	Total.....	300,000.00	1,700,000.00

Philippine Islands.—The department authorities estimated \$1,800 as being required for the fiscal year 1919. No details were submitted as to the amount called for.

Item 203a and its supplies.—Transportation of signal stores.

[Estimate fiscal year 1919, \$1,020,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$1,019,800.00	.....	\$1,019,800.00	\$200.00	.....	\$200.00	\$1,020,000.00
Appropriated fiscal year 1918.....	162,800.00	.....	162,800.00	1,200.00	.....	1,200.00	164,000.00
Expended fiscal year 1917.....	160,467.83	.....	160,467.83	250.00	.....	250.00	160,717.83

REMARKS.

United States.—From this item is paid the cost of transportation of all signal stores and supplies, including aeroplanes and other supplies for the Aviation Section.

Philippine Islands.—The department authorities estimated \$200 as being required for the fiscal year 1919. No details were submitted as to the amount called for.

Item 203b and its supplies.—Transportation of engineering stores.

[Estimate fiscal year 1919, \$510,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$509,900.00	.....	\$509,900.00	\$100.00	.....	\$100.00	\$510,000.00
Appropriated fiscal year 1918.....	76,400.00	.....	76,400.00	600.00	.....	600.00	77,000.00
Expended fiscal year 1917..	127,814.82	.....	127,814.82	150.00	.....	150.00	127,964.82

REMARKS.

United States.—From this item is paid the cost of transportation of engineer material, supplies, and stores for use in connection with the Army. It does not include cost of transportation of material and supplies used in connection with river and harbor work and other public improvements.

Philippine Islands.—The department authorities estimated \$100 as being required for the fiscal year 1919. No details were submitted as to the amount called for.

Item 203c and its supplies.—Transportation of medical stores.

[Estimate fiscal year 1919, \$170,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$168,500.00	.....	\$168,500.00	\$1,500.00	.....	\$1,500.00	\$170,000.00
Appropriated fiscal year 1918.....	57,000.00	.....	57,000.00	2,000.00	.....	2,000.00	59,000.00
Expended fiscal year 1917..	229,340.19	.....	229,340.19	800.00	.....	800.00	230,140.19

REMARKS.

United States.—From this item is paid the cost of transportation of medical stores and supplies, except certain express shipments which are paid direct by the Medical Department under authority of a clause carried in the annual Army appropriation acts under "Medical Department."

Philippine Islands.—The department authorities estimated \$1,500 as being required for the fiscal year 1919. No details were submitted as to the amount called for.

Item 204 (consolidated).—Transportation of baggage on change of station.

[Estimate fiscal year 1919, \$1,900,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$1,898,700.00	.....	\$1,898,700.00	\$1,300.00	.....	\$1,300.00	\$1,900,000.00
Appropriated fiscal year 1918.....	281,700.00	.....	281,700.00	3,210.00	.....	3,210.00	285,000.00
Expended fiscal year 1917.....	281,167.16	.....	281,167.16	1,250.00	.....	1,250.00	282,417.16

REMARKS.

United States.—This item is for the transportation of baggage and household goods of officers, noncommissioned officers, and civilian employees on change of station. The estimate under this item is based on approximately 1,700,000 officers and enlisted men for 1919.

United States and Philippine Islands.—This item is subdivided under items 204a to 204j, inclusive, as follows:

No.	Transportation of baggage.	Appropriation, 1918.	Estimate, 1919.
204a	Of officers.....	\$243,000.00	\$1,614,395.00
204b	Of enlisted men.....	33,500.00	209,357.00
204c	Of civilian employees, Adjutant General's Department.....	700.00	5,696.00
204d	Of civilian employees, Inspector General's Department.....	100.00	4,747.00
204e	Of civilian employees, Judge Advocate General's Department.....	100.00	4,747.90
204f	Of civilian employees, Quartermaster Corps.....	5,970.00	38,274.00
204g	Of civilian employees, Medical Department.....	800.00	7,595.00
204h	Of civilian employees, Engineers Department.....	350.00	4,747.00
204i	Of civilian employees, Ordnance Department.....	150.00	4,747.00
204j	Of civilian employees, Signal Corps.....	350.00	5,695.00
	Total.....	285,000.00	1,900,000.00

Philippine Islands.—The department authorities estimated \$1,300 as being required for the fiscal year 1919. No details were submitted as to the amount called for.

Item 204a.—Transportation of baggage of officers.

[Estimate fiscal year 1919, \$1,614,395.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$1,613,895.00	.....	\$1,613,895.00	\$500.00	.....	\$500.00	\$1,614,395.00
Appropriated fiscal year 1918.....	241,000.00	.....	241,000.00	2,000.00	.....	2,000.00	243,000.00
Expended fiscal year 1917.....	241,350.92	.....	241,350.92	500.00	.....	500.00	241,850.92

REMARKS.

United States.—From this item is paid the cost of transportation of baggage and household effects of officers changing station under orders, the amount transported for each grade varying as shown under paragraph 1136, Army Regulations, 1913.

Philippine Islands.—The department authorities estimated \$500 as being required for the fiscal year 1919. No details were submitted as to the amount called for.

Item 204b.—Transportation of baggage of enlisted men.

[Estimate fiscal year 1919, \$209,357.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$208,857.00	.....	\$208,857.00	\$500.00	.....	\$500.00	\$209,357.00
Appropriated, fiscal year 1918.....	32,800.00	.....	32,800.00	700.00	.....	700.00	33,500.00
Expended, fiscal year 1917.....	29,154.40	.....	29,154.40	500.00	.....	500.00	29,654.40

REMARKS.

United States.—From this item is paid the cost of transportation of baggage and household effects of noncommissioned officers changing station and also the transportation charges on personal effects shipped for other enlisted men, weight of shipments being limited to 150 pounds per capita for enlisted men below grade 17.

Philippine Islands.—The department authorities estimated \$500 as being required for the fiscal year 1919. No detail was submitted as to the amount called for.

Item 204c.—Transportation of baggage of civilian employees—Adjutant General's Department.

[Estimate fiscal year 1919, \$5,696.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$5,696.00	.....	\$5,696.00	.....	.....	.....	\$5,696.00
Appropriated fiscal year 1918..	660.00	.....	660.00	\$40.00	.....	\$40.00	700.00
Expended fiscal year 1917.....	396.25	.....	396.25	.....	.....	.....	396.25

REMARKS.

United States.—The civilian employees for whom baggage is transported under this item are clerks in the classified civil service.

Philippine Islands.—No estimate submitted by the department authorities.

Item 204d.—Transportation of baggage of civilian employees—Inspector General's Department.

[Estimate fiscal year 1919, \$4,747.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$4,747.00	.....	\$4,747.00	.....	.....	.....	\$4,747.00
Appropriated fiscal year 1918...	90.00	.....	90.00	\$10.00	.....	\$10.00	100.00
Expended fiscal year 1917.....	55.67	.....	55.67	.....	.....	.....	55.67

REMARKS.

United States.—Civilian employees for whom baggage and household effects are transported under this item are clerks under classified civil service.

Philippine Islands.—No estimate submitted by the department authorities.

Item 204e.—Transportation of baggage of civilian employees—Judge Advocate General's Department.

[Estimate fiscal year 1919, \$4,747.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$4,747.00	.....	\$4,747.00	.....	.....	.....	\$4,747.00
Appropriated fiscal year 1918...	80.00	.....	80.00	\$20.00	.....	\$20.00	100.00
Expended fiscal year 1917.....	28.97	.....	28.97	.....	.....	.....	28.97

REMARKS.

United States.—Civilian employees for whom baggage and household goods are transported under this item are clerks under classified civil service.

Philippine Islands.—No estimate submitted by the department authorities.

Item 204f.—Transportation of baggage of civilian employees—Quartermaster Corps.

[Estimate fiscal year 1919, \$38,274.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$37,974.00	.....	\$37,974.00	\$300.00	.....	\$300.00	\$38,274.00
Appropriated, fiscal year 1918.	5,600.00	.....	5,600.00	350.00	.....	350.00	5,950.00
Expended fiscal year 1917.....	5,593.86	.....	5,593.86	250.00	.....	250.00	5,843.86

REMARKS.

United States.—The civilian employees and agents for whom transportation of baggage and household effects are provided under this item are clerks, inspectors of clothing, supplies, etc., civil engineers, superintendents of construction, electrical and mechanical engineers, mechanics and packers of the Quartermaster Corps.

Philippine Islands.—The department authorities estimated \$300 as being required for the fiscal year 1919. No detail was submitted as to the amount called for.

Item 204g.—Transportation of baggage of civilian employees.—Medical Department.

[Estimate fiscal year 1919, \$7,595.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$7,595.00	.....	\$7,595.00	.....	.....	.....	\$7,595.00
Appropriated, fiscal year 1918...	750.00	.....	750.00	\$50.00	.....	\$50.00	800.00
Expended, fiscal year 1917.....	3,560.23	.....	3,560.23	.....	.....	.....	3,560.23

REMARKS.

United States.—Civilian employees under this item are clerks, classified service, and Army nurses.

Philippine Islands.—No estimate submitted by the department authorities.

Item 204h.—*Transportation of baggage of civilian employees—Corps of Engineers.*

[Estimate fiscal year 1919, \$4,747.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$4,747.00	.....	\$4,747.00	.....	.....	.....	\$4,747.00
Appropriated fiscal year 1918....	330.00	.....	330.00	\$20.00	.....	\$20.00	350.00
Expended, fiscal year 1917.....	344.18	.....	344.18	.....	.....	.....	344.18

REMARKS.

United States.—Civilian employees for whom transportation of baggage and household goods is provided under this item are clerks, surveyors, draftsmen, photographers, and master laborers of the Engineer Corps on duty with the Army.

Philippine Islands.—No estimate submitted by the department authorities.

Item 204i.—*Transportation of baggage of civilian employees—Ordnance Department.*

[Estimate fiscal year 1919, \$4,747.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$4,747.00	.....	\$4,747.00	.....	.....	.....	\$4,747.00
Appropriated fiscal year 1918....	130.00	.....	130.00	\$20.00	.....	\$20.00	150.00
Expended fiscal year 1917.....	263.15	.....	263.15	.....	.....	.....	263.15

REMARKS.

United States.—Civilian employees for whom transportation of baggage is provided under this item are clerks, foremen, and machinists of the Ordnance Department.

Philippine Islands.—No estimate submitted by the department authorities.

Item 204j.—*Transportation of baggage of civilian employees—Signal Corps.*

[Estimate fiscal year 1919, \$5,695.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$5,695.00	.....	\$5,695.00	.....	.....	.....	\$5,695.00
Appropriated fiscal year 1918....	320.00	.....	320.00	\$30.00	.....	\$30.00	350.00
Expended fiscal year 1917.....	419.53	.....	419.53	.....	.....	.....	419.53

REMARKS.

United States.—The civilian employees for whom transportation of baggage is provided under this item are clerks, electrical engineers, electricians, mechanics, and laborers of the Signal Corps.

Philippine Islands.—No estimate submitted by the department authorities.

Item 205.—Including the cost of packing and crating.

[Estimate fiscal year 1919, \$287,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$275,000.00	.....	\$275,000.00	\$12,000.00	.....	\$12,000.00	\$287,000.00
Appropriated fiscal year 1918.....	122,000.00	.....	122,000.00	13,000.00	.....	13,000.00	135,000.00
Expended fiscal year 1917.....	123,425.69	.....	123,425.69	10,000.00	.....	10,000.00	133,425.69

REMARKS.

This item covers cost of packing and crating supplies and baggage. The allowance for packing and crating baggage is based on 60 cents per hundred pounds, on the authorized weight of each grade as shown under paragraph 1136, Army Regulations, 1913.

The total amount shown, \$287,000, is subdivided under packing and crating supplies, \$95,700, and packing and crating baggage, \$191,300.

United States.—The estimate under this item for the cost of packing and crating is based on approximately 700,000 officers and enlisted men, at \$0.41 per capita.

Philippine Islands.—The department authorities estimated \$12,000 as being required for the fiscal year 1919. No details were submitted as to the expenditure of the amount called for.

Item 206.—Transportation of recruits.

[Estimate fiscal year 1919, \$1,520,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$1,519,000.00	.....	\$1,519,000.00	\$1,000.00	.....	\$1,000.00	\$1,520,000.00
Appropriated fiscal year 1918.....	1,222,820.00	.....	1,222,820.00	1,000.00	.....	1,000.00	1,223,820.00
Expended fiscal year 1917.....	3,118,665.08	.....	3,118,665.08	1,000.00	.....	1,000.00	3,119,665.08

REMARKS.

United States.—Applicants for enlistment accepted at recruiting stations are sent to recruit depots and depots posts for final physical examination and enlistment if found qualified.

The estimate under this item for the transportation of recruits is based on \$8 per capita for approximately 190,000 men.

Philippine Islands.—The department authorities estimated \$1,000 as being required for the fiscal year 1919. No details were submitted as to expenditure of amount called for.

Item 207.—Transportation of recruiting parties.

[Estimate fiscal year 1919, \$60,000.]

	United States.			Philippine Islands.			Grand total.
	Current re-quirements.	New con-struction.	Total.	Current re-quirements.	New con-struction.	Total.	
Estimate.....	\$59,500.00	.....	\$59,500.00	\$500.00	.....	\$500.00	\$60,000.00
Appropriated fiscal year 1918.....	33,300.00	.....	33,300.00	400.00	.....	400.00	33,700.00
Expended fiscal year 1917....	101,808.15	.....	101,808.15	500.00	.....	500.00	102,308.15

REMARKS.

United States.—This item is for the cost of recruiting parties that are sent from the general recruiting stations to substations and other points for the purposes of securing recruits.

The estimate under this item for the transportation of recruiting parties is based on \$8 per capita for approximately 7,500 men.

Philippine Islands.—Department authorities estimated \$500 as being required for the fiscal year 1919. No details were submitted as to the amount called for.

Item 208.—Transportation of applicants for enlistment.

[Estimate fiscal year 1919, \$420,000.]

	United States.			Philippine Islands.			Grand total.
	Current re-quirements.	New con-struction.	Total.	Current re-quirements.	New con-struction.	Total.	
Estimate.....	\$420,000.00	.....	\$420,000.00	.....	.....	.....	\$420,000.00
Appropriated fiscal year 1918.....	342,700.00	.....	342,700.00	.....	.....	.....	342,700.00
Expended fiscal year 1917....	1,072,292.87	.....	1,072,292.87	.....	.....	.....	1,072,292.87

REMARKS.

United States.—This estimate is for the travel expenses of applicants for enlistment between recruiting stations and recruit depots and depot posts, and of rejected applicants from recruit depots and depot posts to place of enlistment.

The estimate under this item for the transportation of applicants for enlistment is based on \$8 per capita for approximately 52,500 men.

Philippine Islands.—No estimate submitted by the department authorities.

Item 209.—Travel allowance to enlisted men on discharge.

[Estimate fiscal year 1919, \$3,500,000.]

	United States.			Philippine Islands.			Grand total.
	Current re-quirements.	New construc-tion.	Total.	Current re-quirements.	New construc-tion.	Total.	
Estimate.....	\$3,460,000.00	.....	\$3,460,000.00	\$40,000.00	.....	\$40,000.00	\$3,500,000.00
Appropriated fis-cal year 1918.....	1,555,000.00	.....	1,555,000.00	45,000.00	.....	45,000.00	1,600,000.00
Expended fiscal year 1917.....	1,145,642.33	.....	1,145,642.33	44,000.00	.....	44,000.00	1,189,642.33

REMARKS.

From this item is paid the travel allowance to enlisted men on discharge.
United States.—The estimate under this item for travel allowance to enlisted men on discharge is based on approximately 700,000 officers and men at \$50 per capita.
Philippine Islands.—The department authorities estimated \$40,000 as being required for the fiscal year 1919. No details were submitted as to the amount called for.

Item 210.—Transportation of persons, on their discharge from the United States Disciplinary Barracks, or from any place in which they have been held on a sentence of dishonorable discharge and confinement for more than six months, or from the Government Hospital for the Insane, after transfer thereto from such barracks or place, to their homes (or elsewhere, as they may elect), provided the cost in each case shall not be greater than the place of last enlistment.
[Estimate fiscal year 1919, \$160,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$160,000.00	.....	\$160,000.00	.....	.....	.....	\$160,000.00
Appropriated fiscal year 1918.....	28,000.00	.....	28,000.00	.....	.....	.....	28,000.00
Expended fiscal year 1917..	22,682.85	.....	22,682.85	.....	.....	.....	22,682.85

REMARKS.

United States.—The tentative strength for 1919 (approximately 1,700,000 officers and men) being approximately 570 per cent greater than the strength for 1918 (approximately 300,000 officers and men), the estimate for 1919 was based to this extent over the appropriation for 1918.
Philippine Islands.—No estimate submitted by the department authorities.

Item 211.—Transportation of supplies furnished the militia for the permanent equipment thereof.

Expended fiscal year 1917 in the United States for current requirements \$7,607.84. No estimate for fiscal year 1919.

REMARKS.

No estimate was made for the fiscal year 1918, as such expenditures were paid from funds provided under the militia appropriations, and that estimate submitted by the Militia Bureau. It is presumed this situation still exists, and no estimate is made for the fiscal year 1919.

Item 212 (consolidated).—Transportation of the necessary agents and other employees.
[Estimate fiscal year 1919, \$120,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$118,485.00	.....	\$118,485.00	\$1,515.00	.....	\$1,515.00	\$120,000.00
Appropriated fiscal year 1918.....	48,000.00	.....	48,000.00	2,000.00	.....	2,000.00	50,000.00
Expended fiscal year 1917..	355,467.69	.....	355,467.69	1,450.00	.....	1,450.00	356,917.69

REMARKS.

From this item is paid the cost of transportation of civilian employees of the War Department when traveling on duty under competent orders. Included in this cost is railroad or steamer fare and sleeping car or parlor car accommodations.

This item is subdivided under items 212a to 212h, inclusive, showing each bureau of the War Department as follows:

Item.	Bureau.	Appropriation, 1918.	Estimate, 1919.
212a	Adjutant General's Department.....	\$1,600.00	\$3,705.00
212b	Inspector General's Department.....	700.00	1,285.00
212c	Judge Advocate General's Department.....	300.00	652.00
212d	Quartermaster Corps.....	38,500.00	92,233.00
212e	Medical Department.....	5,400.00	12,516.00
212f	Engineer Corps.....	300.00	648.00
212g	Ordnance Department.....	600.00	1,807.00
212h	Signal Corps.....	2,600.00	7,154.00
	Total.....	50,000.00	120,000.00

United States.—The estimate under this item for the transportation of the necessary agents and other employees is based on approximately 4,000 employees at \$30 per capita.

Philippine Islands.—The department authorities estimated \$1,450 as being required for the fiscal year 1919. No details were submitted as to the amount called for.

Item 212e.—*Transportation of the necessary agents and other employees of The Adjutant General's Department.*

[Estimate fiscal year 1919, \$3,705.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$3,555.00	.....	\$3,555.00	\$150.00	.....	\$150.00	\$3,705.00
Appropriated fiscal year 1918....	1,450.00	.....	1,450.00	150.00	.....	150.00	1,600.00
Expended fiscal year 1917.....	6,429.75	.....	6,429.75	100.00	.....	100.00	6,529.75

REMARKS.

The civilian employees for whom transportation is provided under this item are clerks, classified civil service.

Philippine Islands.—The department authorities estimated \$150 as being required for the fiscal year 1919. No details were submitted as to the amount called for.

Item 212b.—*Transportation of the necessary agents and other employees of the Inspector General's Department.*

[Estimate fiscal year 1919, \$1,285.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$1,185.00	.....	\$1,185.00	\$100.00	.....	\$100.00	\$1,285.00
Appropriated fiscal year 1918....	600.00	.....	600.00	100.00	.....	100.00	700.00
Expended fiscal year 1917.....	3,334.61	.....	3,334.61	100.00	.....	100.00	3,434.61

REMARKS.

The civilian employees for whom transportation is provided under this item are clerks, classified civil service.

Philippine Islands.—The department authorities estimated \$100 as being required for the fiscal year 1919. No details were submitted as to the amount called for.

Item 212c.—Transportation of the necessary agents and other employees of the Judge Advocate General's Department.

[Estimate fiscal year 1919, \$652.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$592.00	.....	\$592.00	\$60.00	.....	\$60.00	\$652.00
Appropriated fiscal year 1918....	240.00	.....	240.00	60.00	.....	60.00	300.00
Expended fiscal year 1917.....	836.41	.....	836.41	50.00	.....	50.00	886.41

REMARKS.

The civilian employees for whom transportation is provided under this item are clerks, classified civil service.

Philippine Islands.—The department authorities estimated \$60 as being required for the fiscal year 1919. No details were submitted as to the amount called for.

Item 212d.—Transportation of the necessary agents and other employees of the Quartermaster Corps.

[Estimate fiscal year 1919, \$92,233.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$91,233.00	.....	\$91,233.00	\$1,000.00	.....	\$1,000.00	\$92,233.00
Appropriated fiscal year 1918....	37,000.00	.....	37,000.00	1,500.00	.....	1,500.00	38,500.00
Expended fiscal year 1917.....	232,593.14	.....	232,593.14	1,000.00	.....	1,000.00	233,593.14

REMARKS.

The civilian employees for whom transportation is provided under this item are clerks, inspectors of clothing, supplies, etc., civil engineers, superintendents of construction, electrical and mechanical engineers, mechanics, and packers of the Quartermaster Corps.

Philippine Islands.—The department authorities estimated \$1,000 as being required for the fiscal year 1919. No details were submitted as to the amount called for.

Item 212e.—Transportation of the necessary agents and other employees of the Medical Department.

[Estimate fiscal year 1919, \$12,516.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$12,441.00	.....	\$12,441.00	\$75.00	.....	\$75.00	\$12,516.00
Appropriated fiscal year 1918....	5,325.00	.....	5,325.00	75.00	.....	75.00	5,400.00
Expended fiscal year 1917.....	102,083.03	.....	102,083.03	50.00	.....	50.00	102,133.03

REMARKS.

The civilian employees, for whom transportation is provided under this item, are clerks, classified civil service, and Army nurses.

Philippine Islands.—The department authorities estimated \$175 as being required for the fiscal year 1919. No details were submitted as to the amount called for.

Item 212f.—Transportation of the necessary agents and other employees of the Corps of Engineers.

[Estimate fiscal year 1919, \$648.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$593.00	.....	\$593.00	\$55.00	.....	\$55.00	\$648.00
Appropriated fiscal year 1918...	250.00	.....	250.00	50.00	.....	50.00	300.00
Expended fiscal year 1917.....	1,604.14	.....	1,604.14	50.00	.....	50.00	1,654.14

REMARKS.

The civilian employees for whom transportation is provided under this item are clerks, surveyors, draftsmen, photographers, and master laborers of the Engineer Corps when traveling on duty for the Army.

The cost of transportation for employees of the Corps of Engineers engaged in river and harbor work or other public improvements is paid from the appropriations made for such projects.

Philippine Islands.—The department authorities estimated \$55 as being required for the fiscal year 1919. No details were submitted as to the amount called for.

Item 212g.—Transportation of the necessary agents and other employees of the Ordnance Department.

[Estimate fiscal year 1919, \$1,807.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$1,777.00	.....	\$1,777.00	\$30.00	.....	\$30.00	\$1,807.00
Appropriated fiscal year 1918....	580.00	.....	580.00	20.00	.....	20.00	600.00
Expended fiscal year 1917.....	2,513.48	.....	2,513.48	50.00	.....	50.00	2,563.48

REMARKS.

The civilian employees for whom transportation is provided under this item are clerks, foremen, and machinists of the Ordnance Department.

Philippine Islands.—The department authorities estimated \$30 as being required for the fiscal year 1919. No details were submitted as to the amount called for.

Item 212h.—Transportation of the necessary agents and other employees of the Signal Corps.

[Estimated fiscal year 1919, \$7,154.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$7,109.00	.....	\$7,109.00	\$45.00	.....	\$45.00	\$7,154.00
Appropriated fiscal year 1918.	2,555.00	.....	2,555.00	45.00	.....	45.00	2,600.00
Expended fiscal year 1917	6,073.13	.....	6,073.13	50.00	.....	50.00	6,123.13

REMARKS

The civilian employees for whom transportation is provided under this item are clerks, electrical engineers, electricians, mechanics, and laborers of the Signal Corps.

Philippine Islands.—The department authorities estimated \$45 as being required for the fiscal year 1919. No details were submitted as to the amount called for.

Item 213.—Reimbursement of travel expenses, civil employees, per diem allowances in lieu of subsistence not exceeding \$4 for those authorized to receive a per diem allowance.

[Estimate fiscal year 1919, \$150,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$147,500.00	.....	\$147,500.00	\$2,500.00	.....	\$2,500.00	\$150,000.00
Appropriated fiscal year 1918.....	59,200.00	.....	59,200.00	980.00	.....	980.00	60,180.00
Expended fiscal year 1917.....	102,444.12	.....	102,444.12	2,500.00	.....	2,500.00	104,944.12

REMARKS.

From this item is paid reimbursement of actual expenses incurred for meals, lodging bath, and laundry, not exceeding \$4.50 per day, while in transit or at temporary station for less than 30 days, or a flat per diem allowance of \$4 in lieu of subsistence.

Reimbursement is limited to \$1 per day after the first 30 days at any one place.

United States.—The estimate under this item is based on \$1 per day for approximately 500 employees at 300 days each, or 150,000 days.

Philippine Islands.—The department authorities estimated \$2,500 as being required for the fiscal year 1919. No details were submitted as to the amount called for.

Item 214.—Transportation of clothing and equipage from Army depots, or places of purchase or delivery, to the several posts and Army depots, and from these depots to the troops in the field.

[Estimate fiscal year 1919, \$1,360,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$1,360,000.00	.....	\$1,360,000.00	.....	.....	.....	\$1,360,000.00
Appropriated fiscal year 1918.....	300,000.00	.....	300,000.00	.....	.....	.....	300,000.00
Expended fiscal year 1917.....	1,434,782.83	.....	1,434,782.83	.....	.....	.....	1,434,782.83

REMARKS.

From this item is paid the cost of transportation of clothing and also of camp and garrison equipage, such as barrack bags, barrack chairs, iron bedsteads, blankets, cost, flags, lockers, poles, tents, etc.

United States.—The estimate under this item is based on approximately 113,333 tons, at \$12 per ton.

Philippine Islands.—No estimate submitted by the department authorities.

Item 215 (consolidated).—Transportation of other quartermaster stores from Army depots, or places of purchase or delivery, to the several posts and Army depots, and from these depots to the troops in the field.

[Estimate fiscal year 1919, \$38,560,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$38,415,000.00	.....	\$38,415,000.00	\$145,000.00	.....	\$145,000.00	\$38,560,000.00
Appropriated fiscal year 1918....	1,453,000.00	.....	1,453,000.00	160,000.00	.....	160,000.00	1,613,000.00
Expended fiscal year 1917.....	4,101,628.26	.....	4,101,628.26	120,000.00	.....	120,000.00	4,221,628.26

REMARKS.

This item provides for cost of transportation of all supplies of the Quartermaster Corps, exclusive of clothing and equipment, shown under item 214, from places of purchase or delivery to the several Army posts and depots, and from these depots to posts or troops in the field. Transportation for supplies for other bureaus of the War Department is provided under items 203, 216, and 217.

This item is subdivided under items 215a to 215d, inclusive, as follows:

Item.	Quartermaster stores.	Appropriation, 1918.	Estimate, 1919.
215a	Transportation of subsistence stores.....	\$449,000	\$11,544,500
215b	Transportation of horses for Cavalry, Artillery, etc.....	74,200	1,152,450
215c	Transportation of draft and pack animals.....	22,100	768,300
215d	Transportation of Miscellaneous quartermaster stores.....	1,057,100	25,094,750
	Total.....	1,613,000	38,560,000

United States.—The estimate under this item is based as follows:

Subsistence, 1,217,035 tons, at \$8 per ton.....	\$9,736,280
Forage, 3,917,257 tons, at \$6 per ton.....	23,503,540
Motor vehicles, 236,220 tons, at \$14 per ton.....	3,307,080
Other quartermaster supplies, 186,810 tons, at \$10 per ton.....	1,868,100
Total.....	38,415,000

Philippine Islands.—The department authorities estimated \$145,000 as being required for the fiscal year 1919. No details were submitted as to the amount called for.

Item 215a.—Transportation of other quartermaster stores, transportation of subsistence stores.

[Estimate fiscal year 1919, \$11,544,500.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$11,524,500.00	.....	\$11,524,500.00	\$20,000.00	.....	\$20,000.00	\$11,544,500.00
Appropriated fiscal year 1918.....	429,600.00	.....	429,600.00	20,000.00	.....	20,000.00	449,600.00
Expended fiscal year 1917.....	948,232.24	.....	948,232.24	15,000.00	.....	15,000.00	963,232.24

REMARKS.

From this subitem is paid the cost of transportation of all subsistence stores for the Army.

Philippine Islands.—The department authorities estimated \$20,000 as being required for the fiscal year 1919. No details were submitted as to the amount called for.

Item 215b.—Transportation of other quartermaster stores: Transportation of Cavalry, Artillery, Engineer, Signal Corps, etc., horses from place of purchase.

[Estimate fiscal year 1919, \$1,152,450.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New construc-tion.	Total.	Current require-ments.	New construc-tion.	Total.	
Estimate.....	\$1,152,450.00	.....	\$1,152,450.00	.....	.....	.....	\$1,152,450.00
Appropriated fiscal year 1918.....	67,200.00	.....	67,200.00	\$7,000.00	.....	\$7,000.00	74,200.00
Expended fiscal year 1917.....	396,465.34	.....	396,465.34	.....	.....	.....	396,465.34

REMARKS.

From this item is paid the cost of transportation of horses for mounted organizations from place of purchase to remount depots, or to organizations, and from remount depots to organizations, the cost of transportation in connection with changes of station of organizations being paid from item 202c.

Philippine Islands.—No estimate submitted by the department authorities.

Item 215c.—Transportation of other Quartermaster stores—Transportation of draft and pack animals from place of purchase.

[Estimate fiscal year 1919, \$768,300.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New construc-tion.	Total.	Current require-ments.	New construc-tion.	Total.	
Estimate.....	\$768,300.00	.....	\$768,300.00	.....	.....	.....	\$768,300.00
Appropriated fis-cal year 1918....	19,100.00	.....	19,100.00	\$3,000.00	.....	\$3 000.00	22,100.00
Expended fiscal year 1917.....	101,174.03	.....	101,174.03	.....	.....	.....	101.174.03

REMARKS.

From this item is paid the cost of transportation of draft and pack animals from place of purchase to remount depots, or organizations, and from remount depots to organi-zations, the cost of transportation in connection with change of station or organization being paid from item 202c.

Philippine Islands.—No estimate submitted by the department authorities.

Item 215d.—Transportation of other Quartermaster stores, transportation of miscellaneous Quartermaster stores.

[Estimate fiscal year 1919, \$25,094,750.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$24,969,750.00	.....	\$24,969,750.00	\$125,000.00	.....	\$125,000.00	\$25,094,750.00
Appropriated fiscal year 1918.....	937,100.00	.....	937,100.00	130,000.00	.....	130,000.00	1,067,100.00
Expended fiscal year 1917.....	2,655,756.65	.....	2,655,756.65	.....	.....	.....	2,655,756.65

REMARKS.

This subitem covers the cost of transportation of fuel, forage, and all other Quartermaster stores and supplies, other than clothing and equipage, subsistence stores, and animals, which are estimated for under other items or subitems of this appropriation.
Philippine Islands.—The department authorities estimated \$125,000 as being required for the fiscal year 1919. No details were submitted as to the amount called for.

Item 216.—Transportation of horse equipment.

[Estimate fiscal year 1919, \$95,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$95,000.00	.....	\$95,000.00	.....	.....	.....	\$95,000.00
Appropriated fiscal year 1918.....	15,700.00	.....	15,700.00	.....	.....	.....	15,700.00
Expended fiscal year 1917...	27,715.41	.....	27,715.41	.....	.....	.....	27,715.41

REMARKS.

From this item is paid the cost of transportation for horse equipment furnished by the Ordnance Department, such as saddles, saddle blankets, bridles, etc. The transportation of harness and pack rigging furnished by the Quartermaster Corps is paid from item 215d.
United States.—The estimate under this item for transportation of horse equipment is based on approximately 1,700,000 officers and men as against 300,000 officers and men for 1918.
Philippine Islands.—No estimate submitted by the department authorities.

Item 217.—Transportation of ordnance, ordnance stores, and small arms from the foundries and armories to the arsenals, fortifications, frontier posts, and Army depots.

[Estimate fiscal year 1919, \$26,000,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$25,995,000.00	.....	\$25,995,000.00	\$5,000.00	.....	\$5,000.00	\$26,000,000.00
Appropriated fiscal year 1918....	802,500.00	.....	802,500.00	7,500.00	.....	7,500.00	810,000.00
Expended fiscal year 1917.....	1,028,666.86	.....	1,028,666.86	5,000.00	.....	5,000.00	1,033,666.86

REMARKS.

From this item is paid the cost of transportation of all ordnance, ordnance stores, and small arms, including guns and gun carriages.

United States.—The estimate under this item is based on 2,599,500 tons at \$10 per ton. The first estimate furnished by the Chief of Ordnance was for \$60,000,000, which was reduced by \$30,000,000, and subsequently reduced to figure shown.

Philippine Islands.—The department authorities estimated \$5,000 as being required for the fiscal year 1919. No details were submitted as to the amount called for.

Item 218.—Wharfage, rental of.

[Estimate fiscal year 1919, \$58,500.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$57,700.00	.....	\$57,700.00	\$800.00	.....	\$800.00	\$58,500.00
Appropriated fiscal year 1918..	56,600.00	.....	56,600.00	500.00	.....	500.00	57,100.00
Expended fiscal year 1917.....	48,333.00	.....	48,333.00	.....	.....	.....	48,333.00

REMARKS.

United States.—This estimate is based upon the actual expenditures for the lease and hire of wharfage facilities during the fiscal year 1917. The present estimate is \$9.367 greater than the actual cost for the fiscal year 1917, but it will be necessary during the fiscal year 1919 to lease wharfage at Seattle at a cost of approximately \$9,000. The wharf at Seattle that was previously leased for use by vessels pertaining to the Quartermaster Corps was destroyed by fire on June 30, 1916, and as same could not be rebuilt during the fiscal year 1917 the best arrangements it was possible to make for the wharfage of vessels of the Quartermaster Corps (which caused considerable inconvenience) were taken advantage of. The remaining increase of \$367 is included for the purpose of meeting any emergency requirements which may arise due to the existence of war conditions.

Philippine Islands.—The estimate submitted by the department authorities under this item is \$300 greater than the estimate for this purpose for the fiscal year 1918, and no expenditures were reported for the fiscal year 1917. It is assumed that requirements in the Philippines for the fiscal year 1919 necessitate the inclusion of this amount, although no explanation in regard thereto is submitted.

Item 219.—Tolls and ferriages, payment of.

[Estimate fiscal year 1919, \$171,225.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$170,975.00	.....	\$170,975.00	\$250.00	.....	\$250.00	\$171,225.00
Appropriated fiscal year 1918.....	9,750.00	.....	9,750.00	250.00	.....	250.00	10,000.00
Expended fiscal year 1917..	8,912.26	.....	8,912.26	300.00	.....	300.00	9,212.26

REMARKS.

From this item is paid the cost of tolls across bridges and over turnpikes, where tolls are charged, incurred in the movement of troops on practice marches, maneuvers, etc., and also of ferry charges under similar conditions.

United States.—The estimate under this item for payment of tolls and ferriages is based on 10 cents per capita for approximately 1,712,245 officers and men.

Philippine Islands.—Department authorities estimated \$250 as being required for the fiscal year 1919. No details were submitted as to the amount called for.

Item 220—Transportation of funds of the Army.

[Estimate, fiscal year 1919, \$120,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$118,500.00	.....	\$118,500.00	\$1,500.00	.....	\$1,500.00	\$120,000.00
Appropriated, fiscal year 1918.....	7,100.00	.....	7,100.00	500.00	.....	500.00	7,600.00
Expended, fiscal year 1917..	18,812.95	.....	18,812.95	.....	.....	.....	18,812.95

REMARKS.

From this item is paid the cost of transportation of moneys forwarded for use in payment of troops and other purposes. These funds are transported by express.

United States.—The estimate under this item for transportation of the funds of the Army is based on 7 cents per capita for 1,712,245 officers and men.

Philippine Islands.—Estimated \$1,500 as being required for the fiscal year 1919.

Item A. T. 221.—Draft animals (purchase and hire of).

[Estimate fiscal year 1919, \$17,457,455.]

For the purpose of cost keeping this item is subdivided. The items and amount estimated under each item are as follows:

Item.	Character.	Supplies.	Services.	Total.
A. T. 221-A.	Purchase of draft animals.....	\$14,469,050.00	.....	\$14,469,050.00
A. T. 221-B.	Hire of draft animals.....	.....	\$5,000.00	5,000.00
A. T. 221-C.	Supplies incident to care of draft and pack animals.....	2,983,405.00	.....	2,983,405.00
	Total.....	17,452,455.00	5,000.00	17,457,455.00

SUMMARY.

	Supplies.	Services.	Total.
United States.....	\$17,428,455.00	\$5,000.00	\$17,433,455.00
Philippine Islands.....	24,000.00	.....	24,000.00
Total.....	17,452,455.00	5,000.00	17,457,455.00

COMPARATIVE STATEMENT.

Item.	Character.	Cost fiscal year 1917.	Appropriation fiscal year 1918.	Estimate fiscal year 1919.
A. T. 221-A.	Purchase of draft animals.....	\$4,387,811.00	\$46,000.00	\$14,469,050.00
A. T. 221-B.	Hire of draft animals.....	32,649.00	2,000.00	5,000.00
A. T. 221-C.	Supplies incident to care of draft and pack animals.....	129,702.00	27,000.00	2,983,405.00
	Total.....	4,550,162.00	75,000.00	17,457,455.00

Item A. T. 221a.—Purchase of draft animals.

[Estimate, fiscal year 1919, \$14,469,050.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$14,449,050	.....	14,449,050	\$20,000	.....	\$20,000	\$14,469,050
Appropriated, fiscal year 1918.....	15,600	.....	15,600	30,400	.....	30,400	46,000
Expended, fiscal year 1917.....	4,372,811	.....	4,372,811	15,000	.....	15,000	4,387,811

REMARKS.

United States.—This estimate is based on an elisted strength of 45 infantry divisions, organized in accordance with Tables of Organization, Series A, August, 1917. These tables authorize 3,058 draft mules for one infantry division, or 137,610 for 45 infantry divisions. It is estimated that 50 per cent replenishment will be needed during the fiscal year 1919 if the present emergency continues, requiring 68,805 draft miles which, at an average price of \$210, will cost \$14,449,050.

Philippine Islands.—Estimate for \$20,000 is based on figures submitted by the department authorities Philippine Department, and is considered necessary to replace animals which may die or become unserviceable during the fiscal year 1919.

Item A. T. 221b.—Hire. draft animals.

[Estimate, fiscal year 1919, \$5,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$5,000	.....	\$5,000	.....	.....	.....	\$5,000
Appropriated, fiscal year 1918....	2,000	.....	2,000	.....	.....	.....	2,000
Expended, fiscal year 1917.....	32,649	.....	32,649	.....	.....	.....	32,649

REMARKS.

United States.—The above amount is estimated to cover any emergency hire of transportation that may be necessary in connection with the movement of troops.

Philippine Islands.—No estimate submitted.

Item A. T. 221c.—Supplies incident to care of draft and pack animals.

[Estimate fiscal year, 1919, \$2,983,405.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$2,979,405	.....	\$2,979,405	\$4,000	.....	\$4,000	\$2,983,405
Appropriated fiscal year 1918.....	23,000	.....	23,000	4,000	.....	4,000	27,000
Expended fiscal year 1917.....	124,702	.....	124,702	5,000	.....	5,000	129,702

REMARKS.

United States.—The amount called for under this item is required for the purchase of such articles as horse blankets, brushes, curry combs, stable forks, buckets, lanterns, etc. The allowances are fixed by General Orders, No. 39, War Department, 1915.

The amount estimated for is required to replace such articles as may be worn out or expended in the service.

Philippine Islands.—This estimate is the same as that submitted by department authorities, Philippine Department.

Item A. T. 222.—Purchase of pack animals.

[Estimate fiscal year 1919, \$745,700.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$735,300	.....	\$735,300	\$10,400	.....	\$10,400	\$745,700
Appropriated fiscal year 1918....	10,080	.....	10,080	20,320	.....	20,320	30,400
Expended fiscal year 1917.....	704,684	.....	704,684	20,000	.....	20,000	724,684

REMARKS.

United States.—The amount estimated for is based on an enlisted strength of 45 infantry divisions, organized in accordance with Tables of Organization, Series A, August, 1917. These tables authorize 172 pack and riding mules for one infantry division, or 7,740 for 45 infantry divisions. It is estimated that 50 per cent replenishment will be needed during the fiscal year 1919 if the present emergency continues, requiring 3,870 pack and riding mules which at an average price of \$190 will cost \$735,300.

Philippine Islands.—The estimate for \$10,400 is based on figures submitted by the department authorities, Philippine Department, and is considered necessary to replace animals which may die or become unserviceable during the fiscal year 1919.

Item A. T. 222a.—Hire of pack animals. (No estimate for fiscal year 1919.)

REMARKS.

No estimate.

Item A. T. 222b.—Hire of horses, riding. (No estimate for fiscal year 1919.)

REMARKS.

No estimate.

Item A. T. 223.—Harness, purchase of.

[Estimate fiscal year 1919, \$4,723,433.]

For the purpose of cost keeping, this item is subdivided.
The subitems and amount estimated under each item are as follows:

Item.	Character.	Supplies.	Service.	Total.
223A	Purchase of harness.....	\$3,348,540.00	.....	\$3,348,540.00
223B	Purchase of harness parts.....	692,318.00	.....	692,318.00
223C	Purchase of pack rigging.....	453,150.00	.....	453,150.00
223D	Purchase of pack-rigging pads.....	229,425.00	.....	229,425.00
	Total.....	4,723,433.00	.....	4,723,433.00

SUMMARY.

	Supplies.	Service.	Total.
United States.....	\$4,700,533.00	.....	\$4,700,533.00
Philippine Islands.....	13,900.00	.....	13,900.00
Total.....	4,723,433.00	.....	4,723,433.00

Item A. T. 223,—Harness, purchase of—Continued.

COMPARATIVE STATEMENT.

Item.	Character.	Cost, fiscal year 1917.	Appropriation, fiscal year 1918.	Estimate, fiscal year 1919.
223A	Purchase of harness.....	\$284,733.00	\$70,273.88	\$3,348,540.00
223B	Purchase of harness parts.....	33,568.00	38,900.00	692,318.00
223C	Purchase of pack rigging.....	33,568.00	21,700.00	453,150.00
223D	Purchase of pack-rigging parts.....	105,997.00	24,259.12	229,425.00
	Total.....	457,866.00	155,133.00	4,723,433.00

Item A. T. 223a.—Purchase of harness.

[Estimate fiscal year 1919, \$3,348,540.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$3,344,040.00	.....	\$3,344,040.00	\$4,500.00	.....	\$4,500.00	\$3,348,540.00
Appropriated fiscal year 1918.....	61,438.88	.....	61,438.88	8,835.00	.....	8,835.00	70,273.88
Expended fiscal year 1917.....	279,633.00	.....	279,633.00	5,100.00	.....	5,100.00	284,733.00

REMARKS.

United States.—This estimate is based on 100 per cent replenishment required for the authorized allowance of draft animals for 45 Infantry divisions organized in accordance with Tables of Organization, Series A, August, 1917, requiring the following sets of harness:

59,715 s. s. wheel harness, at \$29.50 per set..... \$1,761,592.50
 59,715 s. s. lead harness, at \$26.50 per set..... 1,582,447.50

Total..... 3,344,040.00

Philippine Islands.—This estimate is the same as that submitted by department authorities, Philippine Department.

	Fiscal year—		
	1916	1917	1918
Harness, ambulance and wagon, wheel, s. s.....	\$18 04	\$19.46	\$29.50
Harness, ambulance and wagon, lead, s. s.....	15.60	16.83	26.50

Item A. T. 223b.—Purchase of harness parts.

[Estimate, fiscal year 1919, \$692,318.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$688,318.00	.....	\$688,318.00	\$4,000.00	.....	\$4,000.00	\$692,318.00
Appropriated, fiscal year 1918.....	30,000.00	.....	30,000.00	8,900.00	.....	8,900.00	38,900.00
Expended, fiscal year 1917.....	31,868.00	.....	31,868.00	1,700.00	.....	1,700.00	33,568.00

REMARKS.

United States.—This estimate is based on a per capita cost of \$0.4604 (double estimated per capita cost, fiscal year 1918), which will amount to \$688,318 for a force of 1,712,245 officers and men. This amount will be necessary if the present emergency continues, due to service in the field.

Philippine Islands.—\$4,000 is the amount estimated for by the Philippine authorities

Item A. T. 223c.—Purchase of pack rigging.

[Estimate fiscal year 1919, \$453,150.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$451,450.00	.....	\$451,450.00	\$1,700.00	.....	\$1,700.00	\$453,150.00
Appropriated fiscal year 1918.....	20,000.00	.....	20,000.00	1,700.00	.....	1,700.00	21,700.00
Expended fiscal year 1917..	31,868.00	.....	31,868.00	1,700.00	.....	1,700.00	33,568.00

REMARKS.

United States.—This estimate is based on 100 per cent replenishing of halters aparejos, saddles, etc., required for pack and riding mules pertaining to 45 divisions organized in accordance with Tables of Organization, series A, August, 1917. The equipment required for these animals, should the present emergency continue, will be as follows:

2,740 halters, at \$2.50.....	\$6,850
2,690 aparejos, at \$90.....	242,100
4,050 riding saddles, at \$45.....	182,250
4,050 riding bridles, at \$5.....	20,250
	451,450

Philippine Islands.—The amount called for in this estimate is the same as estimated for by Philippine authorities.

Item A. T. 223.—Purchase of pack-rigging parts.

[Estimate fiscal year 1919, \$229,425.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$225,725.00	.....	\$225,725.00	\$3,700.00	.....	\$3,700.00	\$229,425.00
Appropriated fiscal year 1918.....	20,559.12	.....	20,559.12	3,700.00	.....	3,700.00	24,259.12
Expended fiscal year 1917..	100,997.00	.....	100,997.00	5,000.00	.....	5,000.00	105,997.00

REMARKS

United States.—It is estimated that pack rigging parts amounting to 50 per cent of the value of the pack rigging will be needed during the fiscal year 1919, if the present emergency continues, amounting to \$225,725.

Philippine Islands.—The amount called for in this estimate is the same as estimated for by Philippine authorities.

Item A. T. 224.—Harness, repair of: For the purchase, hire, operation, and maintenance and repair of, as required for the transportation of troops and supplies, and for official, military, and garrison purposes.

[Estimate fiscal year 1919, \$265,915.75.]

For the purpose of cost keeping, this item is divided as follows:
 Item No. 224A—Harness, repair of (by contract or agreement).
 Item No. 224B—Harness, repair of (tools for repairs to pack rigging and harness).
 Item No. 224C—Harness, repair of (materials for repairs to pack rigging and harness).
 The subitems and amount estimated for under each item are as follows:

Item.	Character.	Supplies.	Services.	Total.
224 A	By contract or agreement.....	.....	\$20,549.00	\$20,549.00
224 B	Tools for repairs to pack riggings and harness.....	\$105,400.00	.....	105,400.00
224 C	Materials for repairs to pack riggings and harness.....	139,966.75	.....	139,966.75
	Total.....	245,366.75	20,549.00	265,915.75

SUMMARY.

	Supplies.	Services.	Total.
United States.....	\$237,366.75	\$20,549.00	\$257,915.75
Philippine Islands.....	8,000.00	.....	8,000.00
Total.....	245,366.75	20,549.00	265,915.75

COMPARATIVE STATEMENT.

Item.	Character.	Cost, fiscal year 1917.	Appropriation, fiscal year 1918.	Estimate, fiscal year 1919.
224 A	By contract or agreement.....	\$2,349.00	\$2,000.00	\$20,549.00
224 B	Tools for repairs to pack rigging and harness.....	11,652.00	3,200.00	105,400.00
224 C	Materials for repairs to pack rigging and harness.....	115,680.00	45,000.00	139,966.75
	Total.....	129,681.00	50,200.00	265,915.75

Item A. T. 224a.—Harness, repair of, by contract or agreement.

[Estimate fiscal year 1919, \$20,549.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$20,549.00	.....	\$20,549.00	.....	.....	.....	\$20,549.00
Appropriated fiscal year 1918.....	2,000.00	.....	2,000.00	.....	.....	.....	2,000.00
Expended fiscal year 1917..	2,349.00	.....	2,349.00	.....	.....	.....	2,349.00

REMARKS.

United States.—This estimate is based on a per capita cost of \$0.012, estimated requirements for fiscal year 1918, which will amount to \$20,549 for a force of 1,712,245 officers and men.
Philippine Islands.—No estimate submitted.

Item A. T. 224b.—Tools for repairs to pack rigging and harness.

[Estimate fiscal year 1919, \$105,400.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New construc-tion.	Total.	Current require-ments.	New construc-tion.	Total.	
Estimate.....	\$104,400.00	.....	\$104,400.00	\$1,000.00	.....	\$1,000.00	\$105,400.00
Appropriated fiscal year 1918.....	2,200.00	.....	2,200.00	1,000.00	.....	1,000.00	3,200.00
Expended fiscal year 1917..	10,152.00	.....	10,152.00	1,500.00	.....	1,500.00	11,652.00

REMARKS.

United States.—This estimate is based on 100 per cent replenishment of tools required for 45 Infantry divisions. Each Infantry division is allowed 116 sets of saddlers' tools, or 5,220 sets for 45 divisions, which at \$20 per set will cost \$104,400. This amount is considered necessary should the present emergency continue.

Philippine Islands.—Estimate for \$1,000 is based on figures submitted by the department authorities, Philippine Department.

Item A. T. 224c.—Materials for repairs to pack rigging and harness.

[Estimate fiscal year 1919, \$139,966.75.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New construc-tion.	Total.	Current require-ments.	New construc-tion.	Total.	
Estimate.....	\$132,966.75	.....	\$132,966.75	\$7,000.00	.....	\$7,000.00	\$139,966.75
Appropriated fiscal year 1918.....	38,000.00	.....	38,000.00	7,000.00	.....	7,000.00	45,000.00
Expended fiscal year 1917..	107,680.00	.....	107,680.00	8,000.00	.....	8,000.00	115,680.00

REMARKS.

United States.—This estimate is based on materials required for repairs of pack rigging and harness for 45 Infantry divisions. The following material will be needed to repair each 20 double sets of harness:

40 pounds leather, at 80 cents per pound.....	\$32.00
7 papers needles, at 10 cents.....	.70
4 pounds rivets and burrs, at 10 cents.....	.40
80-ounce thread, 5 pounds, at \$1.50 per pound.....	7.50
80-ounce wax, 5 pounds, at 5 cents per pound.....	.25
	40.85

There will be a total of 65,115 double sets of harness in use with 45 Infantry divisions. The cost of repairing this harness at the rate indicated above will amount to \$132,966.75.

Philippine Islands.—Estimate for \$7,000 is based on figures submitted by the department authorities, Philippine Department.

Item A. T. 225a.—Wagons, purchase of, complete.

[Estimate fiscal year 1919, \$5,765,500.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$5,755,500.00	.....	\$5,755,500.00	\$10,000.00	.....	\$10,000.00	\$5,765,500.00
Appropriated fiscal year 1918....	106,858.00	\$50,000.00	156,858.00	26,192.00	.....	26,192.00	183,050.00
Expended fiscal year 1917.....	371,585.00	.....	371,585.00	8,000.00	.....	8,000.00	379,585.00

REMARKS.

United States.—This estimate is based on 100 per cent replenishment of wagons required for 45 Infantry divisions, authorized in Tables of Organization, Series "A," August, 1917. The following number of wagons will be needed:

11,250 escort wagons, at \$190.....	\$2,137,500.00
6,030 combat wagons, at \$600.....	3,618,000.00
	<hr/> 5,755,500.00

Philippine Islands.—This estimate is the same as that submitted by department authorities, Philippine Department.

Item A. T. 225b.—Wagons, purchase of, wagon parts.

[Estimate fiscal year 1919, \$1,154,100.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$1,151,100.00	.....	\$1,151,100.00	\$3,000.00	.....	\$3,000.00	\$1,154,100.00
Appropriated fiscal year 1918.....	14,000.00	.....	14,000.00	2,950.00	.....	2,950.00	16,950.00
Expended fiscal year 1917.....	113,062.00	.....	113,062.00	4,000.00	.....	4,000.00	117,062.00

REMARKS.

United States.—It is estimated that wagon parts costing 20 per cent of the value of the wagons with 45 Infantry divisions will be required. These parts will cost \$1,151,100. See item 225a for value of wagons.

Philippine Islands.—\$3,000 is the amount estimated for by the department authorities, Philippine Department, to cover cost of wagon parts.

Wagons on hand.

UNITED STATES.

Class of vehicles.	Fiscal year 1918.			Fiscal year 1917.			Fiscal year 1916.		
	Posts and stations.	Stock.	Total.	Posts and stations.	Stock.	Total.	Posts and stations.	Stock.	Total.
Ambulances.....	737	388	1,125	284	423	707	239	172	411
Buckboards.....	247	.....	247	351	1	352	168	6	174
Carriages and surreys.....	31	.....	31	52	.....	52	44	1	45
Doughertys.....	156	21	177	105	58	161	109	56	165
Passenger.....	28	.....	28	104	.....	104	128	.....	128
Station.....	45	2	47	74	7	81	67	8	75
Wagonettes.....	69	.....	69	104	3	107	107	6	113
Wagons:									
Dump.....	19	.....	19	29	.....	29	29	.....	29
Coal.....	12	.....	12	8	.....	8	8	.....	8
Sanitary.....	2	3	5	4	.....	4	4	.....	4
Escort.....	7,115	187	7,302	1,944	2,308	4,252	1,751	664	2,415
Army.....	308	.....	308	376	90	466	203	204	407
Delivery and express.....	168	14	182	343	23	366	313	15	328
Mountain.....	4	325	329	21	.....	21	21	.....	21
Farm.....	59	8	67	99	31	130	173	22	205
Lumber.....	15	.....	15	16	.....	16	26	.....	26
Mail.....	3	.....	3	5	.....	5	5	.....	5
Sprinkling.....	159	15	174	133	21	154	121	3	124
Water.....	84	451	535	51	.....	51	47	.....	47
Trucks, horse.....	67	.....	67	116	.....	116	144	2	146
Total.....	9,328	1,414	10,742	4,219	2,963	7,182	3,707	1,169	4,876

PHILIPPINE ISLANDS.

Class of vehicles.	Fiscal year 1918.	Fiscal year 1917.	Fiscal year 1916.	Fiscal year 1915.
Ambulances.....	35	40	43	55
Wagons:				
Passenger.....	30	54	36	29
Dougherty.....	26	27	33	47
Station.....	3	2	4	4
Delivery.....	101	49	101	87
Escort.....	386	459	416	484
Farm.....	1	3	4	4
Sprinkling.....	10	43	40	40
Water.....	21	20	16	18
Buckboards.....	17	18	20	27
Wagonettes.....	2	2	1	2
Trucks, horse.....	11	17	6	13
Total.....	643	764	720	810

Item A. T. 226.—Wagons (repair of).

[Estimate, fiscal year 1919, \$887,300.]

For the purpose of cost keeping this item is subdivided. The subitems and amounts estimated for under each item are as follows:

Item.	Character.	Supplies.	Services.	Total.
226-A	Repairs under contract or agreement.....	.....	\$82,000.00	\$82,000.00
226-B	Tools for repair of wagons.....	\$422,300.00	.....	422,300.00
226-C	Materials for repair of wagons.....	383,000.00	.....	383,000.00
	Total.....	805,300.00	82,000.00	887,300.00

Item A. T. 226.—Wagons (repair of)—Continued.

SUMMARY.

	Supplies.	Services.	Total.
United States.....	\$800,300.00	\$80,000.00	\$880,300.00
Philippine Islands.....	5,000.00	2,000.00	7,000.00
Total.....	805,300.00	82,000.00	887,300.00

COMPARATIVE STATEMENT.

Item.	Character.	Cost, fiscal year 1917.	Appropriation, fiscal year 1918.	Estimate, fiscal year 1919.
226-A	Repairs under contract or agreement.....	\$7,676.00	\$8,000.00	\$82,000.00
226-B	Tools for repair of wagons.....	21,115.00	8,000.00	422,300.00
226-C	Materials for repair of wagons.....	71,078.00	38,000.00	383,000.00
	Total.....	99,869.00	54,000.00	887,300.00

Item A. T. 226a.—Wagons (repair of); repairs under contract or agreement.

[Estimate fiscal year 1919, \$82,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$80,000.00	.....	\$80,000.00	\$2,000.00	.....	\$2,000.00	\$82,000.00
Appropriated, fiscal year 1918...	8,000.00	.....	8,000.00	.....	.....	.....	8,000.00
Expended, fiscal year 1917.....	4,676.00	.....	4,676.00	3,000.00	.....	3,000.00	7,676.00

REMARKS.

United States.—\$8,000 was estimated for in estimate fiscal year 1918, covering repairs to all wagons under contract for a force of 169,000 men. For a force of 1,712,245 men ten times that amount will be required, or \$80,000.

Philippine Islands.—Estimate for \$2,000 is based on figures submitted by the department authorities, Philippine Department.

Item A. T. 226b.—Tools for repair of wagons.

[Estimate fiscal year 1919, \$422,300.]

	United States.			Philippine Islands.			Grand Total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$420,300.00	.....	\$420,300.00	\$2,000.00	.....	\$2,000.00	\$422,300.00
Appropriated fiscal year 1918...	8,000.00	.....	8,000.00	2,000.00	.....	2,000.00	8,000.00
Expended fiscal year 1917.....	19,115.00	.....	19,115.00	2,000.00	.....	2,000.00	21,115.00

REMARKS.

United States.—This estimate is based on 100 per cent replenishment of blacksmiths', wheelwrights', and carpenters' tools allowed for 45 Infantry divisions. It is estimated that 4,680 sets of blacksmiths' tools will be required for 45 divisions, which at \$53

per set will cost \$248,040, and 5,220 sets of wheelwrights' and carpenters' tools, which at \$33 per set will cost \$172,260, making a total of \$420,300.

The foregoing amount is considered necessary if the forces operate in the field during the fiscal year 1919.

Philippine Islands.—This estimate is the same as that submitted by department authorities, Philippine Department.

Item A. T. 226c.—Materials for repair of wagons.

[Estimate, fiscal year 1919, \$383,000.]

	United States.			Philippine Islands.			Grand Total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$380,000.00	.....	\$380,000.00	\$3,000.00	.....	\$3,000.00	\$383,000.00
Appropriated fiscal year 1918...	38,000.00	.....	38,000.00	2,000.00	.....	2,000.00	38,000.00
Expended fiscal year 1917.....	68,078.00	.....	68,078.00	3,000.00	.....	3,000.00	71,078.00

REMARKS.

United States.—The sum of \$38,000 was appropriated during the fiscal year 1918, for material's for repairs of wagons for a force of 169,000 men. Based on this allowance 10 times the foregoing amount will be needed for material's for repairing wagons with a force of 1,712,245 men, or \$380,000.

Philippine Islands.—Estimate for \$3,000 is based on figures submitted by the department authorities, Philippine Department.

Item A. T. 227.—Carts (purchase and repair of.)

[Estimate fiscal year 1919, \$3 316,500.]

For the purpose of cost keeping this item is subdivided. The subitems and amount estimated for under each item are as follows:

Item.	Character.	Supplies.	Services.	Total.
227A	Purchase of carts, complete.....	\$2,788,000.00	.....	\$2,788,000.00
227B	Repair of carts.....	.....	\$558,500.00	558,500.00
	Total.....	2,788,000.00	558,500.00	3,346,500.00

Summary.

	Supplies.	Services.	Total.
United States.....	\$2,787,500.00	\$557,500.00	\$3,345,000.00
Philippine Islands.....	500.00	1,000.00	1,500.00
Total.....	2,788,000.00	558,500.00	3,346,500.00

Comparative statement.

Item.	Character.	Cost fiscal year 1917.	Appropriation fiscal year 1918.	Estimate fiscal year 1919.
227A	Purchase of carts, complete.....	\$13,651.50	\$4,500.00	\$2,788,000.00
227B	Repair of carts.....	3,453.75	1,500.00	558,500.00
	Total.....	17,105.25	6,000.00	3,346,500.00

Item A. T. 227a.—Purchase of carts, complete.

[Estimate, fiscal year 1919, \$2,788,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$2,787,500.00	.....	\$2,787,500.00	\$500.00	.....	\$500.00	\$2,788,000.00
Appropriated, fiscal year 1918.....	3,000.00	.....	3,000.00	1,500.00	.....	1,500.00	4,500.00
Expended, fiscal year 1917.....	13,151.50	.....	13,151.50	500.00	.....	500.00	13,651.50

REMARKS.

United States.—Should the present emergency continue, it is estimated that 100 per cent replenishment of the following carts with 45 Infantry divisions will be needed to replace carts that will become unserviceable due to field service:

5,040 ration carts, at \$150 each.....	\$756,000
4,950 water carts, at \$300 each.....	1,485,000
810 medical carts, at \$150 each.....	121,500

Total.....	2,362,800
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Miscellaneous carts will also be needed to replace such as may become unserviceable, as follows:

1,000 trench carts, at \$25 each.....	\$25,000
1,000 sanitary carts, at \$250 each.....	250,000
1,000 hand carts, at \$25 each.....	25,000
1,000 dump carts, at \$125 each.....	125,000

Total.....	425,000
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Philippine Islands.—Estimate for \$500 is based on figures submitted by the department authorities, Philippine Department.

Item A. T. 227b—Repair of carts.

[Estimated fiscal year 1919, \$558,500.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$557,500.00	.....	\$557,500.00	\$1,000.00	.....	\$1,000.00	\$558,500.00
Appropriated fiscal year 1918.....	1,000.00	.....	1,000.00	500.00	.....	500.00	1,500.00
Expended fiscal year 1917..	2,453.75	.....	2,453.75	1,000.00	.....	1,000.00	3,453.75

REMARKS.

United States.—It is estimated that funds amounting to 20 per cent of the value of carts specified in item 227-a will be needed to repair carts with 45 Infantry Divisions, or \$557,500.

Philippine Islands.—\$1,000 is the amount estimated for by department authorities, Philippine Department.

Carts.

UNITED STATES.

Carts.	Fiscal year 1918.			Fiscal year 1917.			Fiscal year 1916.			Fiscal year 1915.		
	Posts and station.	Stock.	Total.	Posts and station.	Stock.	Total.	Posts and station.	Stock.	Total.	Posts and station.	Stock.	Total.
Dump.....	404	70	474	718	55	773	727	34	761	707	67	774
Sprinkling.....	34	.....	34	132	.....	132	80	.....	80	778	.....	78
Sanitary.....	98	32	130	127	5	132	128	12	140	120	26	146
Hand.....	779	.....	779	1,049	4	1,053	1,069	110	1,179	1,028	.....	1,028
Coal.....	.....	.....	.....	15	.....	15	15	.....	15	15	.....	15
Feed.....	71	.....	71	87	.....	87	91	.....	91	99	.....	99
Total.....	1,386	102	1,488	2,128	64	2,202	2,110	156	2,266	2,047	93	2,140

PHILIPPINE ISLANDS.

Feed.....	13	.....	13	31	.....	31	30	.....	30	.....	.....	.....
Sanitary.....	21	.....	21	33	.....	33	32	.....	32	32	.....	32
Coal.....	.....	.....	.....	20	.....	20	20	.....	20	20	.....	20
Dump.....	45	.....	45	59	.....	59	51	.....	51	58	.....	58
Hand.....	9	.....	9	166	.....	166	125	.....	125	136	.....	136
Sprinkling.....	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	94	.....	94	309	.....	309	259	.....	259	247	.....	247

Item A. T. 228.—Drays (purchase and repair of).—United States (current requirements): Appropriated, fiscal year 1918, \$700; expended, fiscal year 1917, \$383. No estimate for 1919.

Item A. T. 229.—Other vehicles (purchase, hire, operation, maintenance, and repair of).

For the purpose of cost keeping this item is subdivided. The subitems and amounts estimated for under each item is as follows:

Item.	Character.	Supplies.	Services.	Total.
229a	Purchase of miscellaneous horse-drawn vehicles..	\$136,225.00	.....	\$136,225.00
229b	Repair of miscellaneous horse-drawn vehicles...	.....	\$101,022.45	101,022.45
229c	Purchase of automobiles.....	5,678,500.00	.....	5,678,500.00
229d	Hire of automobiles.....	.....	10,000.00	10,000.00
229e	Repairs to automobiles.....	.....	7,401,000.00	7,401,000.00
229f	Operation and maintenance of automobiles.....	.....	10,364,400.00	10,364,400.00
229g	Purchase of motor trucks.....	69,280,000.00	.....	69,280,000.00
229h	Hire of motor trucks.....	.....	100,000.00	100,000.00
229i	Repair of motor trucks.....	.....	67,375,800.00	67,375,800.00
229j	Operation and maintenance of motor trucks.....	.....	111,939,000.00	111,939,000.00
229k	Purchase of motorcycles.....	1,873,500.00	.....	1,873,500.00
229l	Hire of motorcycles.....	.....	2,000.00	2,000.00
229m	Repair of motorcycles.....	.....	892,700.00	892,700.00
229n	Operation and maintenance of motorcycles.....	.....	2,678,500.00	2,678,500.00
229o	Purchase of bicycles.....	380,400.00	.....	380,400.00
229p	Repair of bicycles.....	.....	126,750.00	126,750.00
	Total.....	77,348,625.00	200,991,172.45	278,339,797.45

Summary.

	Supplies.	Services.	Total.
United States.....	\$77,236,875.00	\$200,940,772.45	\$278,177,647.45
Philippine Islands.....	111,750.00	50,400.00	162,150.00
Total.....	77,348,625.00	200,991,172.45	278,339,797.45

Item A. T. 229a—Purchase of miscellaneous horse-drawn vehicles, complete.—United States (current requirements): Expended, fiscal year 1917, \$40,034. Estimate, fiscal year 1919, \$136,225.

REMARKS.

United States.—The amount of \$136,225 estimated for under this item is based on the same number of miscellaneous vehicles that have been purchased during the fiscal year 1918, namely:

500 spring mountain wagons, at \$226.05.....	\$113, 025
125 delivery wagons, at \$185.60.....	23, 200
Total.....	136, 225

Philippine Islands.—No estimate submitted.
Item A. T. 229b—Repair of miscellaneous horse-drawn vehicles.—United States (current requirements): Appropriated, fiscal year 1918, \$10,000; expended, fiscal year 1917, \$40,263. Estimate, fiscal year 1919, \$101,022.45.

REMARKS.

United States.—This estimate is based on figures for fiscal year 1918. Ten thousand dollars was appropriated during the fiscal year 1918 for a force of 169,000 men, or a per capita cost of \$0. 059. Basing estimate for fiscal year 1919 on 45 divisions, or 1,712,245 men, the sum required for this purpose will amount to \$101,022.45.
Philippine Islands.—No estimate submitted.

Item 229c.—Other vehicles: Purchase of automobiles.

[Estimate fiscal year 1919, \$5,678,500.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New construc-tion.	Total.	Current require-ments.	New construc-tion.	Total.	
Estimate.....	\$5, 668, 500. 00	.....	\$5, 668, 500. 00	\$10, 000. 00	.....	\$10, 000. 00	\$5, 678, 500. 00
Appropriated fiscal year 1918.....	12, 000. 00	.....	12, 000. 00	.....	.....	.....	12, 000. 00
Expended fiscal year 1917.....	130, 685. 34	.....	130, 685. 34	11, 291. 45	.....	11, 291. 45	141, 976. 79

REMARKS.

United States.—There were in the service of the United States on June 30, 1917, 437 automobiles of all kinds, and funds for approximately 5,520 additional automobiles were provided for in the deficiency appropriations for the enlarged Army under war conditions, but it is not anticipated that more than 30 divisions will be equipped by June 30, 1918.
This estimate is based on the equipment of 45 divisions in the field, viz:

	7-pas-senger touring cars.	5-pas-senger touring cars.	Road-sters.
45 divisions, per table of allowances.....	315	1, 215	450
Replacements (50 per cent).....	158	608	225
Army headquarters, corps headquarters, and general use (100 per cent)...	473	1, 823	675
Total.....	946	3, 646	1, 350
Less 30 divisions equipped to June 30, 1918.....	210	710	300
	736	2, 936	1, 050

The cost of this number of automobiles is estimated as follows:
736 7-passenger touring cars, at \$2,500 each..... \$1, 840, 000
2,936 5-passenger touring cars, at \$1,000 each..... 2, 936, 000
1,050 2-passenger roadsters, at \$850 each..... 892, 500
5, 669, 500

	Pur- chased or con- tracted for.	Deliv- eries to Nov. 15, 1917.	Total cost.	Average cost.
Roadsters.....	187	187	\$157,629.70	\$842.94
5-passenger.....	1,612	1,612	1,139,933.68	707.15
7-passenger.....	174	174	418,739.00	2,406.55

Approximately 141 roadsters, 858 5-passenger, 115 7-passenger have been shipped or released for shipment abroad for use of American expeditionary forces up to November 15, 1917.

Philippine Islands.—The department authorities have estimated that the requirements of the service in this particular can be provided for with the sum indicated (\$10,000). The number and kind of automobiles to be procured has not been specified.

Item 229d.—Other vehicles; hire of automobiles.

[Estimate fiscal year 1919, \$10,000.]

	United States.			Philippine Islands.			Grand total.
	Current require- ments.	New con- struction.	Total.	Current require- ments.	New con- struction.	Total.	
Estimate.....	\$10,000.00	.....	\$10,000.00	.....	.....	.....	\$10,000.0
Appropriated fiscal year 1918..	500.00	.....	500.00	.....	.....	.....	500.00
Expended fiscal year 1917.....	23,812.16	.....	23,812.16	.....	.....	.....	23,000.00

REMARKS.

United States.—The amount of \$10,000 has been included in the estimate to cover infrequent requests from depots, encampments, and posts for motor transportation where special urgency may demand, and Government-owned vehicles are not available.

Philippine Islands.—No estimate submitted by the department authorities under this item.

Item 229e.—Other vehicles, repairs to automobiles.

[Estimate fiscal year 1919, \$7,401,000.]

	United States.			Philippine Islands.			Grand. total.
	Current require- ments.	New con- struction.	Total.	Current require- ments.	New con- struction.	Total.	
Estimate.....	\$7,396,000.00	.....	\$7,396,000.00	\$5,000.00	.....	\$5,000.00	\$7,401,000.00
Appropriated fiscal year 1918.....	43,500.00	.....	43,500.00	4,000.00	.....	4,000.00	47,500.00
Expended fiscal year 1917.....	176,866.18	.....	176,866.18	3,200.00	.....	3,200.00	180,066.18

REMARKS.

United States.—This estimate is based upon the repairs and maintenance of approximately 14,792 automobiles of all kinds pertaining to the Quartermaster Corps and other bureaus of the War Department, at the average cost of \$500 for each machine per annum under war conditions. This will provide the necessary spare parts for general overhauling at frequent intervals so as to keep the owned automobiles in condition to meet all military requirements abroad and at home.

Philippine Islands.—The sum of \$5,000 is considered necessary by the department authorities for this purpose.

Item 229f.—Operation and maintenance of automobiles.

[Estimate fiscal year 1919, \$10,364,400.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$10,354,400	.....	\$10,354,400	\$10,000	.....	\$10,000	\$10,364,400
Appropriated fiscal year 1918.....	90,000	.....	90,000	7,000	.....	7,000	97,000
Expended fiscal year 1917.....	68,877	.....	68,877	8,000	.....	8,000	76,877

REMARKS.

United States.—These figures are based upon the operation and maintenance under war conditions of 14,792 automobiles pertaining to the Quartermaster's Corps and all other Bureaus of the War Department at the average cost of \$700 per annum. This, it is estimated, will provide the necessary gasoline, lubricants, and accessories required for the official use of all Government-owned vehicles connected with the Army.

Philippine Islands.—The sum of \$10,000 is considered necessary by the department authorities for the operation of this class of motor vehicles on hand and to be procured.

Item 229g.—Other vehicles, purchase of motor trucks.

[Estimate fiscal year 1919, \$69,280,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$69,180,000.00	.....	\$69,180,000.00	\$100,000.00	.....	\$100,000.00	\$69,280,000.00
Appropriated fiscal year 1918.....	8,800.00	.....	8,800.00	.....	.....	.....	8,800.00
Expended fiscal year 1915.....	549,387.24	.....	549,387.24	103,673.00	.....	103,673.00	653,060.24

REMARKS.

United States.—This estimate is based on the procurement of the necessary motor trucks for the equipment of 45 divisions in the field under war conditions, as follows:

	Heavy (3-ton).	Light (repair).	Machine shops.
Required for 45 divisions under tables of allowances.....	10,125	270	.....
Replacements (50 per cent).....	5,063	135	.....
Army and corps line of communication and general use (100 per cent). {	15,188	405	.....
	100	100	100
Repair-shop units.....	30,476	910	100
Provided for 30 divisions to June 30, 1918.....	13,500	460	60
	16,976	450	40

The estimated cost of this number of motor trucks is as follows:

16,976 motor trucks, 3-ton, at \$4,000.....	\$67,904,000
450 motor trucks, light, at \$2,000.....	900,000
40 machine-shop trucks, at \$9,400.....	376,000
	69,180,000

The number of trucks and similar equipment purchased, contracted, and actually delivered from April 1 to November 15, 1917, is as follows:

	Purchased or con- tracted for.	Deliveries to Nov. 15, 1917.	Total cost of trucks delivered.	Average cost.
4, 5, and 6 ton trucks.....	63	63	\$288,473.50	\$4,518.94
3-ton trucks.....	20,538	897	3,071,947.80	3,424.69
1½-ton trucks.....	4,723	2,316	6,890,398.97	2,975.13
½-ton trucks.....	709	709	503,664.51	717.43
Tractors, trailers, dock trucks, etc.....	1,285	1,285	931,785.00	.....

Approximately 8 5-ton trucks, 728 3-ton trucks, 1,667 1½-ton trucks, 394 light trucks, 1,285 tractors, trailers, dock trucks, etc., have been shipped or released for shipment abroad for use of American expeditionary forces up to November 15, 1917.

Philippine Islands.—The department authorities estimate that \$100,000 will be required to provide the necessary new vehicles of this class required to meet existing conditions and to replace others worn out in the service.

Item 229h.—Other vehicles; hire of motor trucks.

[Estimate fiscal year 1919, \$100,000.]

	United States.			Philippine Islands.			Grand total.
	Current require- ments.	New construc- tion.	Total.	Current require- ments.	New construc- tion.	Total.	
Estimate.....	\$100,000.00	.....	\$100,000.00	.....	.....	.....	\$100,000.00
Appropriated fiscal year 1918.....	.....	.....	.....	.....	.....	.....	.....
Expended fiscal year 1917...	44,689.03	.....	44,689.03	.....	.....	.....	44,689.03

REMARKS.

United States.—This amount is considered essential to meet special conditions at depots and encampments where the temporary hire of motor trucks will obviate the purchase of such vehicles which otherwise would be necessary.

Philippine Islands.—No estimate submitted by the department authorities upon this item.

Item 229i.—Other vehicles: Repair of motor trucks.

[Estimate fiscal year 1919, \$67,375,800.]

	United States.			Philippine Islands.			Grand total.
	Current require- ments.	New construc- tion.	Total.	Current require- ments.	New construc- tion.	Total.	
Estimate.....	\$67,365,800.00	.....	\$67,365,800.00	\$10,000.00	.....	\$10,000.00	\$67,375,800.00
Appropriated fiscal year 1918.....	590,000.00	.....	590,000.00	5,000.00	.....	5,000.00	595,000.00
Expended fiscal year 1917.....	772,120.51	.....	772,120.51	10,000.00	.....	10,000.00	782,120.51

REMARKS.

United States.—This estimate is based upon the repair and maintenance under war conditions of 81,739 motor trucks and approximately 6,492 tractors owned and operated by the Quartermaster Corps and other bureaus of the War Department at an average annual cost of \$800 each truck and approximately \$300 for each tractor (spare parts thereof being furnished by the Ordnance Department). Frequent overhauling

will be necessary to keep such vehicles in active service. The spare parts, tools, and machinery to accomplish this work expeditiously will be obtained under this item.

The machinery, tools, and equipment for the base repair shops in France have been procured at an approximate cost of \$4,089,744.86. Repair parts and accessories for the use of these shops have been obtained and forwarded or released to destination at the following cost:

For trucks.....	\$7, 289, 186. 51
For automobiles.....	209, 824. 36
For motorcycles.....	320, 158. 98
For bicycles.....	8, 580. 00
Total.....	7, 827, 749. 85

The tires, inner tubes and castings for motor vehicles furnished for the same shops have cost as follows:

For trucks.....	\$2, 267, 162. 00
For automobiles.....	984, 098. 00
For motorcycles.....	130, 850. 00
For bicycles.....	31, 700. 00

Total..... 3, 413, 810. 00

Philippine Islands.—The funds asked for by the department authorities for the maintenance of this class of equipment is included in this estimate.

Item 229j.—Other vehicles: Operation and maintenance of motor trucks.

[Estimate fiscal year 1919, \$111,939,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$111, 915, 000	.....	\$111, 915, 000	\$24, 000	.....	\$24, 000	\$111, 939, 000
Appropriated fiscal year 1918.....	1, 115, 802	.....	1 115, 802	8, 000	.....	8, 000	1, 123, 802
Expended fiscal year 1917.....	428, 091	.....	428, 091	15, 000	.....	15, 000	443, 091

REMARKS.

United States.—The amount estimated for this purpose is based upon the operation and maintenance of 81739 motor trucks owned by the Quartermaster Corps and other bureaus of the War Department, at an average cost of \$1,200 each per annum, and for the operation and maintenance of approximately 6,492 tractors of various sizes for the Ordnance Department at an average cost of \$2,130 each per annum. This will provide for the necessary gasoline and lubricants required under war conditions.

Philippine Islands.—The department authorities have estimated the sum of \$24,000 will be required for the operation and maintenance of motor trucks. This exceeds the amount expended for this purpose during 1917 by \$9,000, which is due to the additional trucks to be maintained.

Item 229k.—Other vehicles: Purchase of motorcycles.

[Estimate fiscal year 1919, \$1,873,500.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$1, 872, 500	.....	\$1, 872, 500	\$1, 000	.....	\$1, 000	\$1, 873, 500
Appropriated fiscal year 1918.....	6, 000	.....	6, 000	.....	.....	.....	6, 000
Expended fiscal year 1917.....	65, 203	.....	65, 203	825	.....	825	66, 028

REMARKS.

United States.—This estimate is based upon the procurement of 5,350 motorcycles for the equipment of the enlarged Army under war conditions at an average cost of \$350 each, including side car and necessary accessories. The basis of the calculations is as follows:

For equipment, 40 divisions, under Tables of Organization.....	4,050
For replacement (50 per cent).....	2,025
For Army and corps headquarters and for general use (100 per cent).....	6,075
For machine-shop units (4 each).....	400
Total.....	12,550
Provided for under the deficiency appropriation, 1918.....	7,200
Required to complete equipment.....	5,350

Purchased or contracted for, motorcycles, 6,640; side cars, 3,290. Deliveries to November 15, 1917, motorcycles, 5,672; side cars, 3,035. Total cost, motorcycles, \$1,634,784.74; side cars, \$210,380. Average cost, motorcycles, \$288.22; side cars, \$69.32.

Approximately 2,353 motorcycles and 2,353 side cars have been shipped or released for shipment abroad for use of American expeditionary forces up to November 15, 1917.

Philippine Islands.—The department authorities have submitted estimate that \$1,000 will be required for this purpose during the fiscal year 1919. Eight hundred and twenty-five dollars was expended under this subitem during 1917.

Item 229l.—Other vehicles; hire of motorcycles.

[Estimate fiscal year 1919, \$2,000.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New construc-tion.	Total.	Current require-ments.	New construc-tion.	Total.	
Estimate.....	\$2,000	.....	\$2,000	.....	.....	.....	\$2,000
Appropriated fiscal year 1918 .....	.....	.....	.....	.....	.....	.....	.....
Expended fiscal year 1917.....	.....	.....	.....	.....	.....	.....	.....

REMARKS.

United States.—The amount of \$2,000 has been included in the estimate for this purpose to provide for temporary messenger and other dispatch service during the fiscal year, where it would not be advantageous to purchase this class of equipment or where purchase could not be consummated in time to meet the existing exigency.

Philippine Islands.—No estimate.

Item 229m.—Other vehicles; repair of motorcycles.

[Estimate fiscal year 1919, \$892,700.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New construc-tion.	Total.	Current require-ments.	New construc-tion.	Total.	
Estimate.....	\$892,500	.....	\$892,500	\$200	.....	\$200	\$892,700
Appropriated fiscal year 1918	5,425	.....	5,425	.....	.....	.....	5,425
Expended fiscal year 1917.....	20,163	.....	20,163	200	.....	200	20,363

REMARKS.

United States.—The figures submitted are based upon the repair of approximately 17,850 motorcycles on hand or to be procured during the period covered by the estimate, at an average cost of \$50 per annum for each machine.

Philippine Islands.—The department authorities have included this amount for the upkeep of motorcycles owned by the Government and in use in the islands.

Item 229n.—Other vehicles: Operation and maintenance of motorcycles.

[Estimate fiscal year 1919, \$2,578,500.]

	United States.			Philippine Islands.			Grand total.
	Current equipments.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$2,677,500	.....	\$2,677,500	\$1,000	.....	\$1,000	\$2,678,500
Appropriated fiscal year 1918..	80,555	.....	80,555	.....	.....	.....	80,555
Expended fiscal year 1917.....	5,197	.....	5,197	1,000	.....	1,000	6,197

REMARKS.

United States.—The amount estimated for is based upon the operation and maintenance, under war conditions, of 17,850 motorcycles now owned or provided for in regular and deficiency appropriations at an average cost of \$150 per annum for each machine. This will provide the necessary gasoline, lubricants and other running supplies.

Philippine Islands.—The department authorities have estimated that the amount named will be required to operate the motorcycles connected with that department.

Item 229o.—Other vehicles: Purchase of bicycles.

[Estimate fiscal year 1919, \$380,400.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$379,650	.....	\$379,650	\$750	.....	\$750	\$380,400
Appropriated fiscal year 1918....	1,560	.....	1,560	750	.....	750	2,310
Expended fiscal year 1917.....	1,612	.....	1,612	200	.....	200	1,812

REMARKS.

United States.—The estimate is based upon the procurement of 259 bicycles for the equipment of each of the 45 divisions in the field, as prescribed in the Tables of Organization, Series A, at an average cost of \$30 each, with the addition of 1 000 bicycles for messenger service at depots and posts. The bicycle is a new article of equipment for divisions, and no funds for this purpose have heretofore been asked for.

Purchased or contracted for, 10 230; deliveries to November 15, 1917, 3,467; total cost, \$104 614.28; average cost, \$30.17.

Approximately 3,343 bicycles have been shipped or leased for shipment abroad for use of American Expeditionary Forces.

Philippine Islands.—The department authorities submitted the amount estimated for as necessary to provide this class of equipment during the fiscal year.

Item 229p.—Other vehicles: Repair of bicycles.

[Estimate fiscal year 1919, \$126,750.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$126,550	.....	\$126,550	\$200	.....	\$200	\$126,750
Appropriated fiscal year 1918....	400	.....	400	200	.....	200	600
Expended fiscal year 1917.....	892	.....	892	300	.....	300	1,192

REMARKS.

United States.—The estimate is based upon the proper upkeep of 12,655 bicycles provided for 45 divisions of the Army in the field at an average cost of \$10 each. This will provide the tires, spare parts and accessories incident to the severe service required under war conditions.

Philippine Islands.—The estimate of \$200 is made by the department authorities, which is \$100 less than the sum expended for this purpose during the fiscal year 1917.

Item 230 (consolidated).—Drayage, cartage, and hauling.

[Estimate fiscal year 1919, \$410,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$410,000.00	.....	\$410,000.00	.....	.....	.....	\$410,000.00
Appropriated fiscal year 1918.....	80,000.00	.....	80,000.00	.....	.....	.....	80,000.00
Expended fiscal year 1917..	181,359.33	.....	181,359.33	.....	.....	.....	181,359.33

REMARKS.

From this item is paid the cost of drayage and hauling of all stores and supplies. This item is subdivided under item 230a to 230d, inclusive, showing cost at posts, depots, etc., as follows:

Item.	Where furnished.	Appropriation, 1918.	Estimate, 1919.
230a	At posts.....	\$39,000.00	\$205,000.00
230b	At depots.....	28,000.00	143,500.00
230c	At arsenals and armories.....	8,000.00	41,000.00
230d	In the field.....	5,000.00	20,500.00
	Total.....	80,000.00	410,000.00

United States.—The estimate under this item is based on 1,712,245 officers and men at 24 cents per capita.

Philippine Islands.—No estimate submitted by the department authorities.

Item 230a.—Drayage, cartage, and hauling at posts.

[Estimate fiscal year 1919, \$205,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$205,000.00	.....	\$205,000.00	.....	.....	.....	\$205,000.00
Appropriated fiscal year 1918.....	39,000.00	.....	39,000.00	.....	.....	.....	39,000.00
Expended fiscal year 1917.....	45,272.85	.....	45,272.85	.....	.....	.....	45,272.85

REMARKS.

From this item is paid the cost of hauling and drayage of stores and supplies at Army posts.

Philippine Islands.—No estimate submitted by the department authorities.

Item 230b.—Drayage, cartage, and hauling at depots.

[Estimate fiscal year 1919, \$143,500.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$143,500.00	.....	\$143,500.00	.....	.....	.....	\$143,500.00
Appropriated fiscal year 1918.....	28,000.00	.....	28,000.00	.....	.....	.....	28,000.00
Expended fiscal year 1917.....	35,785.99	.....	35,785.99	.....	.....	.....	35,785.99

REMARKS.

From this item is paid the cost of drayage and cartage at the several supply depots where there are no owned means of transportation or where such transportation is insufficient.

Philippine Islands.—No estimate submitted by the department authorities.

Item 230c.—Drayage, cartage, and hauling at arsenals and armories.

[Estimate fiscal year 1919, \$41,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$41,000.00	.....	\$41,000.00	.....	.....	.....	\$41,000.00
Appropriated fiscal year 1918.....	8,000.00	.....	8,000.00	.....	.....	.....	8,000.00
Expended fiscal year 1917.....	17,130.64	.....	17,130.64	.....	.....	.....	17,130.64

REMARKS.

From this item is paid the cost of drayage, cartage, and hauling at the various arsenals and armories in connection with the transportation of ordnance, ordnance stores and supplies. About 50 per cent of this amount is used to reimburse the Ordnance Department for hauling performed by that department for the Quartermaster Corps.

Philippine Islands.—No estimate submitted by the department authorities.

Item 230d.—Drayage, cartage, and hauling in the field.

[Estimate fiscal year 1919, \$20,500.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$20,500.00	.....	\$20,500.00	.....	.....	.....	\$20,500.00
Appropriated fiscal year 1918.....	5,000.00	.....	5,000.00	.....	.....	.....	5,000.00
Expended fiscal year 1917.....	83,169.85	.....	83,169.85	.....	.....	.....	83,169.85

REMARKS.

From this item is paid the cost of hauling for troops in the field in connection with the maneuvers, field, service, etc.

Philippine Islands.—No estimate submitted by the department authorities.

Item 231.—Teamsters.

[Estimate fiscal year 1919, \$216,940.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$116,940.00	.....	\$116,940.00	\$100,000.00	.....	\$100,000.00	\$216,940.00
Appropriated fiscal year 1918.....	131,100.00	.....	131,100.00	117,420.00	.....	117,420.00	248,520.00
Expended fiscal year 1917.....	114,540.01	.....	114,540.01	100,000.00	.....	100,000.00	214,540.01

REMARKS.

From this item is defrayed the cost of hire of civilian teamsters. The rate of compensation is shown in the Treasury Book of Estimates for 1919.

United States.—The estimate provides for the hire of 196 teamsters at rates varying from \$360 per annum to \$1,080 per annum. The amount asked for covers only employees of this class actually in service at the beginning of the fiscal year 1918 and does not include any additional employees that may be required incident to war conditions.

Philippine Islands.—The estimate covers the hire of 285 teamsters at rates varying from \$10 to \$50 per month, a decrease of 28 men from the number provided for 1918. These teamsters are largely natives of the Philippine Islands, and as a rule their services cost less than enlisted men, hence it is not the intention to replace them.

This item, as a whole, is \$31,580 less than provided for this purpose during the fiscal year 1918.

Item 232.—Other employees.

[Estimate fiscal year 1919, \$1,139,368.65.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$759,368.65	.....	\$759,368.65	\$380,000.00	.....	\$380,000.00	\$1,139,368.65
Appropriated fiscal year 1918.....	669,952.00	.....	669,952.00	472,948.00	.....	472,948.00	1,142,900.00
Expended fiscal year 1917.....	1,430,371.90	.....	1,430,371.90	400,000.00	.....	400,000.00	1,830,371.90

REMARKS.

This item covers the hire of blacksmiths trainmasters, wagonmasters, packmasters, and other employees engaged in connection with the transportation of the Army. All of these employees are in the classified civil service except cargadores, cooks, draymen, herders, hostlers, scrubbers, stablemen, trainers, truckmen, assistant trainmasters, assistant wagonmasters and some laborers and packers. A complete list of the employees paid from this item for 1917 and those estimated for under this item for 1919 is shown in Treasury Book of Estimates for 1919.

United States.—The estimate for 1919 provides for 747 employees actually in the service at the beginning of the fiscal year 1918 at rates of compensation then authorized, and does not contemplate any increase or rates of pay due to special war conditions.

Philippine Islands.—The estimate as submitted by the department authorities is \$20,000 less than for 1918 and provides for approximately 1,023 employees instead of 1,095.

Item 233.—Ships, purchase of.

[Estimate fiscal year 1919, \$11,500,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New constructions.	Total.	Current requirements.	New constructions.	Total.	
Estimate.....		\$11,500,000.00	\$11,500,000.00				\$11,500,000.00
Appropriated fiscal year 1918.....							
Expended fiscal year 1917.....		6,500.00	6,500.00				6,500.00

REMARKS.

United States.—This item provides for the purchase or construction of three transports at a cost of approximately \$2,000 000 each; also for the purchase of two transports at a total cost of \$5,500,000. By reason of the fact that the Transport *Sumner* grounded off the coast of New Jersey in December, 1916, rendering this vessel unsuitable for further use as an Army transport; and the transfer in April, 1917, of the transports *Meade* and *McClellan* to the Shipping Board (additional tonnage of the character of these two vessels being urgently required by that board), the Army is operating at the present time three transports less than are actually required during normal times. The estimate of \$5,500,000 included in this item provides for the purchase of two additional transports which are urgently required in connection with the existing war. It is contemplated to procure for this sum two first-class troop transports of approximately 8,300 gross tons each, with a passenger-carrying capacity of approximately 2,100 officers and men.

Philippine Islands.—No estimate is submitted by the department authorities for the purchase of ships.

Item 234, consolidated—Sailing public transports.

[Estimate fiscal year 1919, \$2,785,765.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$2,341,865.00		\$2,341,865.00	\$443,900.00		\$443,900.00	\$2,785,765.00
Appropriated, fiscal year 1918.....	1,628,210.00		1,628,210.00	427,300.00		427,300.00	2,055,510.00
Expended, fiscal year 1917.....	1,882,036.96		1,882,036.96	486,200.00		486,200.00	2,368,236.96

REMARKS.

This estimate is a consolidation of items 234a to 234n, inclusive, and provides for the maintenance, operation, and upkeep of 11 ocean-going steamships and one ocean-going tug as per list following:

	Length.	Capacity.						Coal used.		Crew.
		First class.	Second class.	Troops.	Animals.	With troops.	Without troops.	At sea.	In port.	
Pacific Fleet:						<i>Tons.</i>	<i>Tons</i>			
Burnside (cable ship).....	296	3	.....	.....	.....	.....	.....	.....	.....	72
Dix.....	469	2	.....	62	541	.....	.....	55	5	93
Logan.....	465	105	56	1,393	.....	1,768	5,327	70	8	185
Sheridan.....	465	103	56	1,557	.....	1,744	5,291	70	8	185
Sherman.....	465	105	56	1,389	.....	1,810	5,227	75	8	185
Slocum (tug).....	165	.....	.....	.....	.....	.....	.....	10	5	14
Thomas.....	470	140	56	1,629	.....	1,676	5,208	70	8	185
Atlantic Fleet:										
Buford.....	370	67	36	882	.....	2,848	4,628	45	5	139
Kilpatrick.....	370	67	44	942	107	2,341	4,529	45	5	135
Philippine Fleet:										
Warren.....	373	48	.....	324	32	2,909	3,889	.....	.....	.....
Merritt.....	300	40	15	358	.....	.....	.....	.....	.....	.....
Liscum.....	248	24	.....	.....	.....	.....	1,191	.....	.....	.....

Also for the probable operation of two additional transports, funds for the purchase of which (\$5,500,000) are included in the estimate under item 233 (ships, purchase of).

This estimate contemplates increased use of vessels of the Army Transport Service during the fiscal year 1919, due to the prevalence of war conditions, and is \$417,528.04 greater than the expenditures for the fiscal year 1917.

United States.—This estimate is based on the assumption that the regular service will be maintained on the Pacific coast during the entire fiscal year, i. e., the operation of four trans-Pacific transports out of San Francisco; of a transport tug in San Francisco Harbor; the cable steamer *Burnside*, for the maintenance of the Washington-Alaska Cable Service; and a freight and animal transport (the *Dix*) out of Seattle. It is contemplated that two transports will be operated on the Atlantic coast on the New York-Panama run. If funds included in item 233 (ships, purchase of) are provided, it is the intention to operate two additional owned transports in the European service out of an Atlantic port.

The estimate for the United States is \$459,828.04 greater than the expenditures for the maintenance and operation of owned transports during the fiscal year 1917. Most of this increase is found in subitems 234a (fuel) and 234e (employees) and the reasons therefor are found in detail under the explanations of these subitems.

Philippine Islands.—The estimate of the Philippine authorities under this consolidated item provides for the maintenance, operation, and upkeep of three interisland transports for the full year (the *Warren*, *Liscum*, and *Merritt*), which vessels are engaged in the transportation of troops and supplies to the interisland ports and between Manila and China. It will be noted that the estimate for this purpose is \$42,300 less than the reported expenditures for the fiscal year 1917. Filipinos have been substituted for American employees as far as possible in connection with the maintenance and operation of the interisland transports, and for this reason, a material reduction for crew hire has been possible, enabling a total decrease in the estimate over the cost for the fiscal year 1917 of \$42,300.

[Estimate fiscal year 1919, \$675,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$550,000.00	.....	\$550,000.00	\$125,000.00	.....	\$125,000.00	\$675,000.00
Appropriated fiscal year 1918.....	360,000.00	.....	360,000.00	125,000.00	.....	125,000.00	485,000.00
Expended fiscal year 1917.....	440,123.52	.....	440,123.52	120,000.00	.....	120,000.00	560,123.52

REMARKS.

United States.—This item provides for the procurement of all fuel required for the operation of the owned Army Transport Service. The increase in this estimate over appropriation for the fiscal year 1918 is necessitated by the rapidly increasing cost of coal. By comparison of the appropriation for the fiscal year 1917 with the actual cost for that fiscal year, it will be noted that the present estimate is conservative.

Philippine Islands.—The estimate submitted by the department authorities for this purpose is \$5,000 greater than the reported cost for the fiscal year 1917, but can be explained by reason of the fact that the price of fuel is increasing rapidly.

Item 234b-c-d—Deck engine, and steward's supplies.

[Estimate fiscal year 1919, \$258,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$225,000.00	.....	\$225,000.00	\$33,000.00	.....	\$33,000.00	\$258,000.00
Appropriated fiscal year 1918.....	200,000.00	.....	200,000.00	33,000.00	.....	33,000.00	233,000.00
Expended fiscal year 1917.....	215,919.17	.....	215,919.17	30,000.00	.....	30,000.00	245,919.17

REMARKS.

United States.—This item provides for the procurement of all deck, engine, and quartermaster steward supplies (except fuel and water), as well as equipment required for the proper maintenance and operation of vessels of the Army transport service. This estimate is a little greater than the cost for the fiscal year 1917, but the additional amount estimated is believed to be necessary by virtue of the fact that the purchase price of supplies is rapidly increasing.

Philippine Islands.—The estimate submitted by the Philippine department for this purpose is based upon the actual cost for the fiscal year 1917, with an additional amount of \$3,000, which it is assumed is included to cover the increased cost of supplies.

Item 234e.—Employees Army transport service.

[Estimate fiscal year 1919, \$1,200,240.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$1,050,240.00	.....	\$1,050,240.00	\$150,000.00	.....	\$150,000.00	\$1,200,240.00
Appropriated fiscal year 1918.....	695,210.00	.....	695,210.00	140,000.00	.....	140,000.00	835,210.00
Expended fiscal year 1917.....	718,973.75	.....	718,973.75	200,000.00	.....	200,000.00	918,973.75

REMARKS.

United States.—This item provides for payment of crews of four transports operating out of San Francisco and of the tug *Slocum* stationed thereat; of the crews of the transports *Dix* and *Burnside*, operating out of Seattle; and of the crews of two transports on the Atlantic coast. This item also provides for the payment of employees of the shore establishments and caretaking crew at San Francisco. The various grades of employees authorized and their rates of compensation are as shown in the following table. This estimate is \$331,266.25 greater than expenditures during the fiscal year 1917, but is, however, based on the actual amount required. Wages of crews of vessels of the owned transport service have recently been adjusted so that said crews

will receive as nearly as practicable the same wages that are being paid to crews of commercial vessels. The table below shows the rates paid to members of crews of Army Transport Service on June 30, 1917:

Employees on board transports:

3 agents, at \$1,500.....	\$4, 500
7 bakers, chief, at \$1,080..	7, 560
2 bakers, chief, at \$900...	1, 800
4 bakers, chief, at \$840...	3, 360
8 bakers, second, at \$750...	6, 000
6 bakers, third, at \$540...	3, 240
4 bakers, fourth, at \$480...	1, 920
4 barbers, at \$60.....	240
6 bathroom men, at \$420...	2, 520
19 bell boys, at \$180.....	3, 420
7 boatswains, at \$720.....	5, 040
3 boatswains, at \$840.....	2, 520
5 boatswains' mates, at \$660.....	3, 300
2 boatswains' mates, at \$780.....	1, 560
7 butchers, chief, at \$840...	5, 880
2 butchers, chief, at \$720...	1, 440
7 butchers, second, at \$540...	3, 780
6 butchers, third, at \$480...	2, 880
1 caretaker, chief at \$3,000...	3, 000
1 caretaker, first assistant, at \$1,660.....	1, 660
1 caretaker, second assistant, at \$1,500.....	1, 500
1 caretaker, third assistant, at \$1,080.....	1, 080
7 carpenters, at \$750.....	5, 250
2 carpenters, at \$900.....	1, 800
9 clerks, freight, at \$900...	8, 100
4 clerks, quartermaster, at \$1,200.....	4, 800
12 coal passers, at \$660...	7, 920
24 coal passers, at \$600....	14, 400
84 coal passers, at \$540....	45, 360
5 coal passers, at \$600.....	3, 000
9 cooks, chief, at \$1,080...	9, 720
9 cooks, second, at \$900...	8, 100
8 cooks, third, at \$720....	5, 760
4 cooks, fourth, at \$600...	2, 400
5 cooks, fifth, at \$540.....	2, 700
7 cooks, ship's, at \$720....	5, 040
6 cooks, chief, Army, at \$840.....	5, 040
6 cooks, second, Army, at \$720.....	4, 320
6 cooks, third, Army, at \$540.....	3, 240
4 cooks, fourth, Army, at \$480.....	1, 920
1 cook, first, steam galley, at \$780.....	780
1 cook, second, steam galley, at \$540.....	540
2 deck boys, at \$240.....	480
14 dishwashers, at \$420...	5, 880
7 electricians, at \$924....	6, 468
2 electricians, at \$960....	1, 920
2 electricians, assistant, at \$900.....	1, 800
5 electricians, assistant, at \$792.....	3, 960

Employees on board transports—Continued.

2 engineers, chief, at \$2,700.....	\$5, 400
7 engineers, chief, at \$2,310.....	16, 170
1 engineer, chief, at \$2,160	2, 160
1 engineer, chief, at \$2,280	2, 280
2 engineers, assistant, at \$1,800.....	3, 600
9 engineers, assistant, at \$1,680.....	15, 120
2 engineers, assistant, at \$1,680.....	3, 360
3 engineers, second, at \$1,580.....	4, 740
5 engineers, senior, at \$1,580.....	7, 900
5 engineers, junior, at \$1,440.....	7, 200
19 engineers, third assistant, at \$1,380.....	26, 220
4 engineers, fourth assistant, at \$1,580.....	6, 320
5 engineers, deck, at \$840...	4, 200
2 engineers, deck, at \$900...	1, 800
7 engineers, refrigeration, at \$924.....	6, 468
2 engineers, refrigeration, at \$1,140.....	2, 280
6 engineers, refrigeration, assistant, at \$792.....	4, 752
2 engineers, refrigeration, assistant, at \$1,020.....	2, 040
116 firemen, at \$660.....	76, 560
33 firemen, at \$720.....	23, 760
2 firemen, at \$900.....	1, 800
4 janitors, at \$420.....	1, 680
1 machinist, at \$720.....	720
9 masters, at \$3,000.....	27, 000
1 master, at \$2,760.....	2, 760
9 masters-at-arms, at \$660...	5, 950
4 masters-at-arms, at \$720...	2, 880
29 mess boys, at \$420.....	12, 180
8 messmen, at first officers, at \$540.....	4, 320
2 messmen, first officers', at \$420.....	840
5 messmen, second officers', at \$480.....	2, 400
2 messmen, second officers', at \$360.....	720
15 messmen, petty officers', at \$420.....	6, 300
7 officers, first, at \$1,680...	11, 760
1 officer, first, at \$1,560...	1, 560
2 officers, first, at \$1,800...	3, 600
8 officers, second, at \$1,380	11, 040
2 officers, second, at \$1,680	3, 360
2 officers, third, at \$1,560...	3, 120
7 officers, third, at \$1,200...	8, 400
7 officers, fourth, at \$1,020	7, 140
39 oilers, at \$660.....	25, 740

Employees on board transports—Continued.

6 oilers, at \$780.....	\$4, 680
2 oilers, at \$900.....	1, 800
6 pantrymen, second, at \$510.....	3, 060
2 pantrymen, second, at \$420.....	840
6 pantrymen, first, at \$630.....	3, 780
2 pantrymen, first, at \$540.....	1, 080
4 pantrymen, third, at \$450.....	1, 800
2 pantrymen, third, at \$360.....	720
4 pantrymen, second, cabin, at \$480.....	1, 920
1 pilot, at \$2,100.....	2, 100
8 plumbers, at \$864.....	6, 912
1 plumber, assistant, at \$660.....	660
6 porters, at \$540.....	3, 240
11 scullions, at \$480.....	5, 280
4 scullions, at \$300.....	1, 200
147 seamen, at \$660.....	97, 020
10 seamen, at \$600.....	6, 000
4 seamen, at \$780.....	3, 120
48 seamen, at \$720.....	3, 456
4 silvermen, at \$480.....	1, 920
9 stewards, chief, at \$720.....	6, 480
1 steward, chief, at \$900.....	900
8 stewards, second, at \$810.....	6, 480
4 stewards, cabin, at \$600.....	2, 400
7 stewards, third, at \$540.....	3, 780
5 stewardesses, at \$330.....	1, 650
2 stewardesses, at \$430.....	860
14 storekeepers, at \$660.....	9, 240
11 storekeepers, at \$720.....	7, 920
7 storekeepers, first, at \$660.....	4, 620
6 storekeepers, second, at \$540.....	3, 240
1 storekeeper, deck, at \$660.....	660
178 waiters, at \$420.....	74, 760
7 watchmen, at \$450.....	3, 150
2 watchmen, at \$780.....	1, 560
2 watchmen, at \$420.....	840
18 water tenders, at \$660.....	11, 880
6 water tenders, at \$780.....	4, 680
8 wipers, at \$660.....	1, 980
32 wheelmen, at \$660.....	21, 120
8 winchmen, at \$780.....	6, 240
6 yeomen, at \$660.....	3, 960
4 yeomen, at \$480.....	1, 920
Total.....	958, 810
Shore expenses.....	91, 430
Total.....	1, 050, 240

Employees, shore establishments, Army Transport Service:

1 superintendent engineer, at \$3,300.....	\$3, 300
1 superintendent engineer, at \$2,750.....	2, 750
1 assistant superintendent engineer, at \$2,460.....	2, 460
1 assistant marine superintendent and chief stevedore.....	1, 760
1 quartermaster purveyor, at \$1,800.....	1, 800
1 post steward, at \$1,800.....	1, 800
1 wharfinger and forage inspector.....	1, 500
1 assistant wharfinger and forage inspector, at \$1,200.....	1, 200
1 chief caretaker, at \$3,300.....	3, 300
1 chief caretaker, at \$3,000.....	3, 000
1 assistant caretaker, at \$1,800.....	1, 800
1 second assistant caretaker, at \$1,500.....	1, 500
1 third assistant caretaker, at \$1,200.....	1, 200
3 assistant caretakers, at \$1,500.....	4, 500
1 chief engineer, at \$2,400.....	2, 400
1 chief engineer, at \$2,100.....	2, 100
2 assistant engineers, at \$1,800.....	3, 600
2 assistant engineers, at \$1,600.....	3, 200
1 quartermaster agent, at \$1,800.....	1, 800
1 clerk, at \$1,800.....	1, 800
5 clerks, at \$1,440.....	7, 200
5 clerks, at \$1,000.....	5, 000
1 messenger, at \$720.....	720
1 messenger, at \$840.....	840
2 messengers, at \$900.....	1, 800
1 foreman carpenter, at \$1,200.....	1, 200
1 carpenter, at \$600.....	600
5 coal passers, at \$600.....	3, 000
1 boatswain, at \$840.....	840
2 boatswains, at \$540.....	1, 080
1 plumber, at \$780.....	780
2 night watchmen, at \$780.....	1, 560
2 night watchmen, at \$720.....	1, 440
3 firemen, at \$720.....	2, 160
10 firemen, at \$540.....	5, 400
10 seamen, at \$600.....	6, 000
12 seamen, at \$420.....	5, 040
Total.....	91, 430

Philippine Islands.—The estimate submitted by the department authorities for this purpose is \$50,000 less than the reported cost for the fiscal year 1917. As was stated, in consolidated item No. 234, Filipinos have been substituted for American employees as far as possible in connection with the maintenance and operation of the interisland transports, and for this reason a material reduction for crew hire has been possible;

enabling this large decrease over the cost for the fiscal year 1917. The following table shows the various employees and their authorized rates of compensation under this item:

3 quartermaster agents, at \$1,500.	\$4, 500	1 steward, at \$840.....	\$840
3 freight clerks, at \$900.....	2, 700	2 stewards, at \$600.....	1, 200
3 checkers, at \$720.....	2, 160	1 steward, at \$420.....	420
3 masters, at \$3,000.....	9, 000	2 butchers, at \$720.....	1, 440
3 officers, at \$1,500.....	4, 500	1 butcher, at \$360	360
3 officers, at \$1,020.....	3, 060	1 butcher, at \$300.....	300
3 officers, at \$840.....	2, 520	2 cooks, at \$540.....	1, 080
3 officers, at \$720.....	2, 160	1 cook, at \$480.....	480
3 boatswains, at \$480.....	1, 440	3 cooks, at \$420.....	1, 260
2 boatswains' mates, at \$300.....	600	4 cooks, at \$300.....	1, 200
1 boatswain's mate, at \$240.....	240	4 cooks, at \$240.....	960
3 carpenters, at \$480.....	1, 440	1 cook, at \$360.....	360
13 wheelmen, at \$240.....	3, 120	1 cook, at \$180.....	180
82 seamen, at \$180.....	14, 760	1 baker, at \$540.....	540
2 masters-at-arms, at \$480.....	960	1 baker, at \$480.....	480
3 storekeepers, at \$300.....	900	1 baker, at \$420.....	420
2 storekeepers, at \$240.....	480	1 baker, at \$360.....	360
3 engineers, at \$2,100.....	6, 300	1 baker, at \$240.....	240
3 engineers, at \$1,500.....	4, 500	3 scullerymen, at \$180.....	540
3 engineers, at \$1,080.....	3, 240	2 pantrymen, at \$300.....	600
3 engineers, at \$960.....	2, 880	3 pantrymen, at \$240.....	720
3 engineers, at \$780.....	2, 340	3 watchmen, at \$240.....	720
3 refrigerating engineers, at \$780.	2, 340	2 bathroom boys, at \$180.....	360
2 assistant refrigerating engi- neers, at \$480.....	960	4 bell boys, at \$72.....	288
1 launch engineer, at \$360.....	360	1 waiter, at \$240.....	240
2 deck engineers, at \$660.....	1, 320	48 waiters, at \$180.....	8, 640
3 electricians, at \$780.....	2, 340	9 messmen, at \$180.....	1, 620
3 plumbers, at \$780.....	2, 340	To cover pay of employees on ac- crued leave in the United States that have to be replaced by temporary employees.....	6, 000
36 firemen, at \$240.....	8, 640	Total.....	140, 148
18 oilers, at \$300.....	5, 400		
27 coal passers, at \$180.....	4, 860		
9 water tenders, at \$360.....	3, 240		
2 stewards, at \$1,350.....	2, 700		

Item 234f.—Water, Army transport service.

[Estimate fiscal year 1919, \$8,000.]

	United States.			Philippine Islands.			Grand total.
	Current require- ments.	New con- struction.	Total.	Current require- ments.	New con- struction.	Total.	
Estimate.....	\$5,000.00	.....	\$5,000.00	\$3,000.00	.....	\$3,000.00	\$8,000.00
Appropriation fiscal year 1918...	5,000.00	.....	5,000.00	3,000.00	.....	3,000.00	8,000.00
Expended fiscal year 1917.....	4,457.71	.....	4,457.71	3,000.00	.....	3,000.00	7,457.71

REMARKS.

United States.—This item provides for the procurement of all fresh water required for boiler use and other purposes on board vessels of the Army transport service. This estimate is the same as that for the fiscal year 1918.

Philippine Islands.—The estimate submitted by the Philippine department for the procurement of fresh water for Army transports is the same as the reported cost under this item for the fiscal year 1917, and appropriation therefor for the fiscal year 1918.

Item 234g.—Laundry, Army transport service.

[Estimate fiscal year 1919, \$19,500.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$19,000.00	.....	\$19,000.00	\$500.00	.....	\$500.00	\$19,500.00
Appropriated, fiscal year 1918...	32,000.00	.....	32,000.00	500.00	.....	500.00	32,500.00
Expended, fiscal year 1917.....	18,025.27	.....	18,025.27	500.00	.....	500.00	18,525.27

REMARKS.

United States.—This item provides for the laundering of such equipment of vessels of the Army transport service as linen, bunk bottoms, etc. This estimate is based on the actual cost for the fiscal year 1917, being by \$974.73 greater. The decrease in cost for the fiscal year 1917 is due to the fact that a considerable amount of laundering work was done during that fiscal year at the Alcatraz Disciplinary Barracks, which was contracted for during previous fiscal years.

Philippine Islands.—The estimate submitted by the department authorities for this item is based on the actual cost for the fiscal year 1917.

Item 234-h.—Pilotage, Army Transport Service.

[Estimates fiscal year 1919, \$14,500.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$13,500.00	.....	\$13,500.00	\$1,000.00	.....	\$1,000.00	\$14,500.00
Appropriated fiscal year 1918.	14,000.00	.....	14,000.00	500.00	.....	500.00	14,500.00
Expended fiscal year 1917.....	12,928.57	.....	12,928.57	1,000.00	.....	1,000.00	13,928.57

REMARKS.

United States.—This estimate provides for pilotage of vessels of the Army transport service. Fixed rates are charged for this service by the various pilots' associations operating under rules and regulations fixed by State laws. The present estimate is the same as the appropriation for the fiscal year 1918.

Philippine Islands.—The estimate submitted by the department authorities is the same as the reported cost for the fiscal year 1917 and the appropriation for the fiscal year 1918.

Item 234i.—Stevedoring, Army transport service.

[Estimate fiscal year 1919, \$100,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$80,000.00	.....	\$80,000.00	\$20,000.00	.....	\$20,000.00	\$100,000.00
Appropriated fiscal year 1918...	72,000.00	.....	72,000.00	17,000.00	.....	17,000.00	89,000.00
Expended fiscal year 1917.....	79,890.70	.....	79,890.70	20,000.00	.....	20,000.00	99,890.70

REMARKS.

United States.—Stevedoring and longshoring service required in connection with the proper loading and stowing of cargoes aboard outgoing vessels and removal of like cargoes from incoming vessels of the Army transport service are paid from funds included in this item. It also includes payment for such services under contract. The estimate is based on the actual cost for the fiscal year 1917, being only \$109.30 more than said cost.

Philippine Islands.—The estimate submitted by the department authorities for this purpose is the same as the reported cost for the fiscal year 1917.

Item 234j.—Removing ashes, Army transport service.

[Estimate fiscal year 1919, \$1,150.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$750.00	.....	\$750.00	\$400.00	.....	\$400.00	\$1,150.00
Appropriated, fiscal year 1918....	1,000.00	.....	1,000.00	300.00	.....	300.00	1,300.00
Expended, fiscal year 1917.....	659.03	.....	659.03	500.00	.....	500.00	1,195.03

REMARKS.

United States.—Harbor regulations require that ships' ashes be disposed of outside of the harbor limits, and this item provides for such disposition from transports. The estimate is based on expenditures for the fiscal year 1917, being only \$54.97 more than said cost, which is included to provide for contingencies which may arise.

Philippine Islands.—The estimate submitted by the department authorities for this purpose is \$100 less than the reported cost for the fiscal year 1917.

Item 234k.—Painting and cleaning, Army transport service.

[Estimate fiscal year 1919, \$16,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$13,000.00	.....	\$13,000.00	\$3,000.00	.....	\$3,000.00	\$16,000.00
Appropriated fiscal year 1918.	10,000.00	.....	10,000.00	3,000.00	.....	3,000.00	13,000.00
Expended fiscal year 1917	12,307.49	.....	12,307.49	3,000.00	.....	3,000.00	15,307.49

REMARKS.

United States.—This item provides for the chipping, cleaning, and painting of the interior and exterior surfaces of vessels of the Army transport service to prevent deterioration to the greatest possible extent. This work is accomplished as these vessels arrive in port between trips from time to time. The present estimate is \$692.51 greater than the actual cost for the fiscal year 1917, and this additional amount is intended to meet contingencies which may arise.

Philippine Islands.—The estimate submitted by the department authorities under this item is the same as the reported cost for the fiscal year 1917.

Item 234-L.—Miscellaneous shore expenses, Army-transport service.

[Estimate fiscal year 1919, \$33,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$25,000.00	.....	\$25,000.00	\$8,000.00	.....	\$8,000.00	\$33,000.00
Appropriated fiscal year 1918..	25,000.00	.....	25,000.00	5,000.00	.....	5,000.00	30,000.00
Expended fiscal year 1917.....	24,848.97	.....	24,848.97	8,200.00	.....	8,200.00	33,048.97

REMARKS.

United States.—This item provides for all miscellaneous expenses of the transport service, including the offices of the general superintendents and dock forces directly connected with operating the various transports and not specifically provided for in other items of this estimate, such as wharfage, rental of storehouses, lease of submarine signals, electric current, compressed air, handling lines and other such similar shore expenses. This estimate is based on the cost for the fiscal year 1917 with an additional amount of \$151.03 to provide for contingencies which may arise.

Philippine Islands.—The estimate submitted by the department authorities for this purpose is \$200 less than the reported cost for the fiscal year 1917.

Item 234m.—Towage, Army Transport Service.—United States (current requirements): Appropriated fiscal year 1918, \$4,000; expended fiscal year 1917, \$2,333.51. Estimate fiscal year 1919, \$2,500.

REMARKS.

United States.—The hire of tug service from time to time for docking and undocking transports, when owned tugs are not available or are of insufficient power, is paid from funds included in this item. The present estimate is based on the actual cost for the fiscal year 1917, the additional amount of \$166.49 being included to provide for contingencies which may arise.

Philippine Islands.—The department authorities do not submit an estimate for this item, owned tugs being available to meet the needs of the service.

Item 234n.—Repairs, Army Transport Service.

[Estimate fiscal year 1919, \$457,875.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$357,875.00	.....	\$357,875.00	\$100,000.00	.....	\$100,000.00	\$457,875.00
Appropriated fiscal year 1918.....	210,000.00	.....	210,000.00	100,000.00	.....	100,000.00	310,000.00
Expended fiscal year 1917.....	351,533.27	.....	351,533.27	100,000.00	.....	100,000.00	451,533.27

REMARKS.

United States.—This item provides for ordinary repairs required for the proper maintenance of vessels comprising the owned Army transport service. This estimate is based on the cost for the fiscal year 1917, and the amount included herein is necessary in view of the increasing age of these vessels, which makes it requisite that more extensive repairs be accomplished to keep them in serviceable condition.

Philippine Islands.—The estimate submitted by the department authorities for this purpose is the same as the reported cost for the fiscal year 1917.

Item 235.—Consolidated.

[Estimate fiscal year 1919, \$1,123,617.87.]

	United States.			Philippine Islands.			Grand total.
	Current re- quirements.	New con- struction.	Total.	Current re- quirements.	New con- struction.	Total.	
Estimate.....	\$799,617.87	.....	\$799,617.87	\$364,000.00	\$20,000.00	\$384,000.00	\$1,183,617.87
Appropriated fis- cal year 1918....	618,500.00	.....	618,500.00	328,761.00	.....	328,761.00	947,261.00
Expended fiscal year 1917.....	605,378.80	\$235,835.00	841,213.80	355,000.00	.....	355,000.00	1,196,213.80

REMARKS.

This is a consolidation of the estimates submitted under items 235a to 234h,¹ inclusive, and provides for the maintenance and operation of the vessels listed below. These boats are engaged in the transportation of troops and supplies and for other garrison purposes between the posts located on the shores and islands of the various lakes, bays, rivers, and sounds, and the Pacific, Gulf, and Atlantic coasts and the Panama Canal.

Quartermaster boats, United States.

Name.	Class.	Length.	Service.
		<i>Feet.</i>	
General Otis.....	Ferry steamer.....	114	Passenger and freight transportation.
General Hancock.....	do.....	102	Do.
Poe.....	Steam lighter.....	92	Do.
Canby.....	do.....	97	Do.
Williams.....	do.....	145	Do.
El Aguador.....	Freight and passenger steamer.	145	Do.
General Nath. Greene.....	do.....	130	Do.
General T. S. Jessup.....	do.....	130	Do.
General Miffin ¹	do.....	130	Do.
General J. E. Johnston.....	do.....	130	Do.
General Meigs.....	do.....	132	Do.
General McDowell.....	do.....	125	Do.
General Robt. Swartout ¹	do.....	110	Do.
General Timothy Pickering ¹	do.....	110	Do.
General R. N. Batchelder.....	do.....	110	Do.
Henry Wilson ¹	do.....	110	Do.
Sprigg Carroll.....	do.....	110	Do.
General Geo. H. Weeks ¹	do.....	120	Do.
General S. B. Hoabird ¹	do.....	120	Do.
General D. S. Stanley ¹	do.....	120	Do.
Cartwright.....	do.....	104	Do.
General Jeff. C. Davis.....	do.....	120	Do.
General J. W. Jacobs.....	do.....	125	Do.
General Barry.....	do.....	85	Do.
General Howe ¹	do.....	75	Do.
Major Guv Howard.....	do.....	80	Do.
Lieut. C. V. Donaldson.....	do.....	70	Do.
Captain Drum ¹	do.....	83	Do.
Peterson.....	do.....	72	Do.
Colonel Wikoff ¹	Steam tug.....	60	Do.
Lieut. M. W. Keys.....	do.....	45	Do.
Lieut. H. Y. Grubbs ¹	do.....	60	Do.
Lieut. J. A. Gurney ¹	do.....	65	Do.
Captain Anton Springer.....	do.....	65	Do.
Lieut. W. H. Smith ¹	do.....	65	Do.
Lieut. W. H. Schenck ¹	do.....	65	Do.
Captain Watson.....	Steam launch.....	40	Do.
Capron.....	Gasoline launch.....	30	Do.
Lieut. Kelley.....	do.....	30	Do.
Lieut. Ward Cheney.....	do.....	60	Do.
Alcatraz.....	do.....	50	Do.
Florence.....	do.....	40	Do.
Recruit.....	do.....	45	Do.
Lieut. Benchley.....	do.....	30	Do.
Lieut. McCorkle.....	do.....	21	Do.
Captain Brunell.....	do.....	23	Do.
Lieut. Rodney.....	do.....	25	Do.
Lieut. Hazelhurst.....	do.....	30	Do.
Albert Laws.....	do.....	40	Do.
Trumbull.....	do.....	15	Do.

¹ Vessel performs some artillery work in addition to quartermaster duties.

Quartermaster harbor boats, Philippine Islands.

Name.	Class.	Length.	Service.
		<i>Feet.</i>	
El Aguila.....	Dispatch boat.....	185	Commanding general's dispatch boat.
General Weeks.....	Passenger and freight transportation.	140	Transportation.
General Milnev.....	do.....	138	Do.
General Lawton.....	do.....	115	Do.
J. H. Hall.....	do.....	90	Do.
Flake.....	Gunboat.....	64	Do.
General Blanco.....	do.....	80	Do.
Adams.....	Steam launch.....	65	Do.
Barker.....	do.....	84	Do.
Chicago.....	do.....	85	Do.
Egbert.....	do.....	90	Do.
Forby.....	do.....	65	Do.
Gearv.....	do.....	90	Do.
Jewell.....	do.....	90	Do.
Ledvard.....	do.....	90	Do.
Louisville.....	do.....	72	Passenger and freight transportation.
McConville.....	do.....	90	Do.
Missoula.....	do.....	86	Do.
Mitchell.....	do.....	90	Do.
Mobile.....	do.....	83	Do.
Nashville.....	do.....	84	Do.
New Orleans.....	do.....	86	Do.
Peterson.....	do.....	57	Do.
Railly.....	do.....	78	Do.
Rochester.....	do.....	69	Do.
Tilly.....	do.....	65	Do.
West Point.....	do.....	87	Do.
Wheeler.....	do.....	90	Do.
Woodruff.....	do.....	65	Do.
Albatross.....	Gasoline launch.....	35	Do.
Osprey.....	do.....	35	Do.
Pelican.....	do.....	25	Do.
Penguin.....	do.....	22	Do.
Sea Gull.....	do.....	35	Do.

United States.—This estimate is \$41,595.93 less than the cost for the fiscal year 1917. However, during the fiscal year 1917, \$235,835 was spent under subitem 235a (purchase or construction of harbor boats), for which no estimate is submitted. It will be noted, therefore, that the amount included in this estimate for the maintenance and operation of harbor boats is \$194,239.07 greater than the amount expended for that purpose during the fiscal year 1917. A considerable portion of this increase is accredited to subitem 235e (employees, harbor boats), the reason for this being given in the explanation of this item. By the passage of an act of Congress approved June 15, 1916, funds were provided to cover the purchase or construction of approximately the same number of vessels as are being operated by the Quartermaster Corps at the present time. Plans and specifications for the construction of these boats are being developed at the present time, and it is estimated that by the beginning of the fiscal year 1919 one-quarter of these vessels will be in service. It has, therefore, been necessary to estimate for the purchase of fuel, water, and supplies, the hire of crews, and the accomplishment of repairs required for their maintenance and operation, which estimate covers the remaining portion of this increase.

Philippine Islands.—The estimate submitted by the department authorities under this item is based on the reported cost for the fiscal year 1917.

Item 235a.—Purchase or construction, harbor boats.

[Estimate fiscal year 1919, \$20,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....					\$20,000.00	\$20,000.00	\$20,000.00
Appropriated fiscal year 1918.....							
Expended fiscal year 1917.....		\$235,835.00	\$235,835.00				235,835.00

REMARKS.

United States.—No estimate.

Philippine Islands.—The department authorities estimate that \$20,000 will be required for the construction of new harbor boats, although no explanation as to the contemplated construction is submitted.

Item 235b.—Repairs, harbor boats.

[Estimate fiscal year 1919, \$180,888.42.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$80,888.42	.....	\$80,888.42	\$100,000.00	.....	\$100,000.00	\$180,888.42
Appropriated fiscal year 1918.....	80,000.00	.....	80,000.00	100,000.00	.....	100,000.00	180,000.00
Expended fiscal year 1917.....	64,710.74	.....	64,710.74	100,000.00	.....	100,000.00	164,710.74

REMARKS.

United States.—This item provides for necessary repairs to harbor boats to maintain them in proper serviceable condition. The increase of \$16,177.68 in this estimate over the cost for the fiscal year 1917 is necessary, due to the fact that contracts will be entered into during the fiscal year 1918 for the supply of practically the same number of boats as are in the harbor boat service at the present time, a great many of which will be in service during the entire fiscal year 1919.

Philippine Islands.—The estimate submitted by the department authorities for this purpose is the same as the reported cost for the fiscal year 1917.

Item 235c.—Fuel, harbor boats.

[Estimate fiscal year 1919, \$202,500.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$139,500.00	.....	\$139,500.00	\$63,000.00	.....	\$63,000.00	\$202,500.00
Appropriated fiscal year 1918.....	105,000.00	.....	105,000.00	63,000.00	.....	63,000.00	168,000.00
Expended fiscal year 1917.....	113,970.70	.....	113,970.70	60,000.00	.....	60,000.00	173,970.70

REMARKS.

United States.—This item provides for the purchase of coal, gasoline, cordwood, and fuel oil required for operation of vessels of the harbor boat service. The present estimate is approximately \$25,000 greater than the actual cost for the fiscal year 1917. Provision has previously been made for the doubling of the harbor boat service, and it is anticipated that one-fourth of these boats will be in service during the entire fiscal year 1919, making the additional amount herein called for necessary for the operation thereof.

Philippine Islands.—The estimate submitted by the department authorities for this purpose is \$3,000 more than the reported cost for the fiscal year 1917; the same as the appropriation for the fiscal year 1918. It is assumed that the requirements of the Philippines Department make this increase over the reported cost for the fiscal year 1917 necessary.

Item 235d.—Supplies, harbor boats.

[Estimate fiscal year 1919, \$70,625.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$50,625.00	.....	\$50,625.00	\$20,000.00	.....	\$20,000.00	\$70,625.00
Appropriated fiscal year 1918.....	50,000.00	.....	50,000.00	22,000.00	.....	22,000.00	72,000.00
Expended fiscal year 1917..	40,457.30	.....	40,457.30	20,000.00	.....	20,000.00	60,457.30

REMARKS.

United States.—Funds included in this item provide for the purchase of all deck and engine supplies (except fuel and water) and equipment required for the proper upkeep and operation of harbor boats. The present estimate contemplates an increase of \$10,167.70, which is necessary to provide for the purchase of supplies required for the additional vessels which will be in operation during the fiscal year 1919.

Philippine Islands.—The estimate submitted by the department authorities for this purpose is the same as the reported cost for the fiscal year 1917.

Item 235e.—Employees, harbor boats.

[Estimate fiscal year 1919, \$614,152.50.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$472,152.50	.....	\$472,152.50	\$142,000.00	.....	\$142,000.00	\$614,152.50
Appropriated fiscal year 1918.....	355,000.00	.....	355,000.00	141,936.00	.....	141,936.00	496,936.00
Expended fiscal year 1917.....	341,360.01	.....	341,360.01	140,000.00	.....	140,000.00	481,360.01

REMARKS.

United States.—This item provides for the payment of crews and other employees of the harbor-boat service contained in the following list, which shows the number of such employees, their grades, and the rates allowed, as of July 1, 1917. This estimate is \$130,792.49 greater than the actual cost for the fiscal year 1917, but provides for the employment of crews on additional vessels of the harbor-boat service which will be in operation during the fiscal year 1919; also for the payment of crews of all vessels in this service at existing commercial rates on vessels of practically the same size and type, which rates will, in all probability, be greatly increased over the rates now in existence.

Quartermaster employees, United States.

1 boatswain, at \$660.....	\$660.00
1 boatswain, at \$900.....	900.00
1 carpenter, at \$1,200.....	1,200.00
1 carpenter, at \$1,200 (6 months).....	600.00
3 cabin boys, at \$900 (6 months).....	1,350.00
1 cook, at \$600.....	600.00
1 cook, at \$648.....	648.00
2 cooks, at \$840.....	1,680.00
2 cooks, at \$1,800 (6 months).....	1,800.00
1 assistant cook, at \$1,200 (6 months).....	600.00
2 cooks, at \$1,200.....	2,400.00

2 coal passers, at \$840.....	\$1, 680. 00
1 deck hand, at \$1,080 (4 months).....	360. 00
7 deck hands, at \$600.....	4, 200. 00
8 deck hands, at \$660.....	5, 280. 00
3 deck hands, at \$672.....	2, 016. 00
19 deck hands, at \$712.80.....	13, 543. 20
1 deck hand, at \$480.....	480. 00
1 deck hand, at \$648.....	648. 00
34 deck hands, at \$720.....	24, 480. 00
4 deck hands, at \$768.....	3, 072. 00
28 deck hands, at \$780.....	21, 840. 00
9 deck hands, at \$840.....	7, 560. 00
11 deck hands, at \$900 (6 months).....	4, 950. 00
3 engineers, chief, at \$1,260.....	3, 780. 00
3 engineers, chief, at \$1,323.....	3, 969. 00
3 engineers, chief, at \$1,380.....	4, 140. 00
1 engineer, chief, at \$1,449.....	1, 449. 00
3 engineers, chief, at \$1,500.....	4, 500. 00
4 engineers, chief, at \$1,580.....	6, 320. 00
2 engineers, chief, at \$1,659.....	3, 318. 00
5 engineers, chief, at \$1,680.....	8, 400. 00
2 engineers, chief, at \$1,740.....	3, 480. 00
6 engineers, chief, at \$1,780.....	10, 680. 00
3 engineers, chief, at \$1,800.....	5, 400. 00
1 engineer, chief, at \$1,920.....	1, 920. 00
1 engineer, chief, at \$1,985.....	1, 985. 00
7 engineers, assistant, at \$1,260.....	8, 820. 00
2 engineers, assistant, at \$1,080.....	2, 160. 00
3 engineers, assistant, at \$1,323.....	3, 969. 00
7 engineers, assistant, at \$1,380.....	9, 660. 00
2 engineers, assistant, at \$1,440.....	2, 880. 00
2 engineers, assistant, at \$1,500.....	3, 000. 00
1 engineer, at \$900.....	900. 00
1 engineer, at \$1,580.....	1, 580. 00
1 engineer, at \$1,680.....	1, 680. 00
1 engineer, at \$1,260.....	1, 260. 00
1 fireman, at \$1,200 (4 months).....	400. 00
6 firemen, at \$660.....	3, 960. 00
3 firemen, at \$720.....	2, 160. 00
2 firemen, at \$752.....	1, 464. 00
5 firemen, at \$780.....	3, 900. 00
3 firemen, at \$828.....	2, 484. 00
12 firemen, at \$840.....	10, 080. 00
3 firemen, at \$844.80.....	2, 534. 40
6 firemen, at \$858.....	5, 148. 00
9 firemen, at \$900.....	8, 100. 00
2 firemen, at \$910.80.....	1, 821. 00
5 firemen, at \$960.....	4, 800. 00
4 firemen, at \$1 080.....	4, 320. 00
1 master, at \$900.....	900. 00
8 masters, at \$1,260.....	10, 080. 00
3 masters, at \$1,323.....	3, 969. 00
1 master, at \$1,575.....	1, 575. 00
9 masters, at \$1,680.....	15, 120. 00
2 masters, at \$1,764.....	3, 528. 00
4 masters, at \$1,780.....	7, 120. 00
1 master, at \$1,800.....	1, 800. 00
1 master, at \$1,920.....	1, 920. 00
1 master, at \$1 958.....	1, 958. 00
7 masters, at \$1,900.....	13, 860. 00
3 masters, at \$2 100.....	6, 300. 00
1 master, at \$2 220.....	2, 220. 00
3 mates, at \$1,030.....	3, 240. 00
2 mates, at \$1,200.....	2, 400. 00
1 mate, at \$1,223.....	1, 223. 00
6 mates, at \$1,260.....	7, 560. 00
2 mates, at \$1,323.....	2, 646. 00

5 mates, at \$1,380.....	\$6,900.00
1 mate, at \$1,440.....	1,440.00
2 mates, at \$1,500.....	3,000.00
1 mate, at \$1,560.....	1,560.00
2 second mates, at \$1,020.....	2,160.00
1 second mate, at \$1,260.....	1,260.00
3 oilers, at \$720.....	2,160.00
1 oiler, at \$780.....	720.00
1 oiler, at \$792.....	792.00
6 oilers, at \$840.....	5,040.00
2 oilers, at \$858.....	1,716.00
5 oilers, at \$900.....	4,500.00
1 oiler, at \$910.80.....	910.80
2 oilers, at \$960.....	1,920.00
2 pilots, at \$1,800, 6 months.....	1,800.00
1 pilot, at \$1,680.....	1,680.00

Grand total, quartermaster employees..... 374,007.00

Philippine Islands.—The estimate submitted by the department authorities is \$2,000 greater than the reported cost for the fiscal year 1917. The statement below shows the number, grades, and rates of pay of employees of the Philippine harbor-boat service:

1 boatswain, at \$660.....	\$660.00
1 boatswain, at \$828.....	828.00
4 cabin boys, at \$450.....	1,800.00
2 carpenters, at \$1,200.....	2,400.00
1 clerk, at \$1,400.....	1,400.00
2 coal passers, at \$780.....	1,560.00
1 cook, at \$540.....	540.00
2 cooks, at \$648.....	1,396.00
2 cooks, at \$600.....	1,200.00
2 cooks, at \$900.....	1,800.00
1 deckhand, at \$108.....	180.00
11 deckhands, at \$450.....	4,950.00
1 deckhand, at \$540.....	540.00
23 deckhands, at \$600.....	13,890.00
22 deckhands, at \$648.....	14,256.00
38 deckhands, at \$660.....	25,080.00
3 deckhands, at \$765.....	2,295.00
3 deckhands, at \$768.....	2,304.00
28 deckhands, at \$780.....	21,840.00
1 engineer, at \$150.....	150.00
2 engineers, chief, at \$1,800.....	3,600.00
8 engineers, chief, at \$1,780.....	14,240.00
2 engineers, chief, at \$1,740.....	3,480.00
5 engineers, chief, at \$1,680.....	8,400.00

Item 235f.—Water, harbor boats.

[Estimate fiscal year 1919, \$2,125.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$2,125.00	.....	\$2,125.00	.....	.....	.....	\$2,125.00
Appropriated fiscal year 1918....	2,500.00	.....	2,500.00	\$825.00	.....	\$825.00	3,325.00
Expended fiscal year 1917.....	1,710.49	.....	1,710.49	.....	.....	.....	1,710.49

REMARKS.

United States.—Fresh water required for boiler use on vessels of the harbor-boat service is provided from funds included in this item. This estimate is \$414.51 greater than the cost for the fiscal year 1917, but is required for purchase of fresh water which

will be used on the additional vessels of the harbor-boat service which will be in operation during the fiscal year 1919.

Philippine Islands.—No estimate is submitted by the department authorities under this item.

Item 235g.—Charter or hire, harbor boats.

[Estimate fiscal year 1919, \$36,250.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$36,250.00	.....	\$36,250.00	.....	.....	.....	\$36,250.00
Appropriated fiscal year 1918.....	16,000.00	.....	16,000.00	.....	.....	.....	16,000.00
Expended fiscal year 1917..	28,708.00	.....	28,708.00	.....	.....	.....	28,708.00

REMARKS.

United States.—This item provides for the hire or charter of commercial vessels to replace those temporarily out of commission while undergoing repairs; also for the hire of such vessels to supplement the owned service, same being insufficient to meet requirements at all times. This estimate is based on the cost for the fiscal year 1917, with an additional amount of \$7,542 being included in anticipation of added necessities due to the prevalence of war conditions.

Philippine Islands.—No estimate.

Item 235h.—Miscellaneous expenses, harbor boats.

[Estimate fiscal year 1919, \$57,076.95.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$18,076.95	.....	\$18,076.95	\$39,000.00	.....	\$39,000.00	\$57,076.95
Appropriated fiscal year 1918.....	10,000.00	.....	10,000.00	1,000.00	.....	1,000.00	11,000.00
Expended fiscal year 1917...	14,461.56	.....	14,461.56	35,000.00	.....	35,000.00	49,461.56

REMARKS.

United States.—Funds included in this item are required for payment of all miscellaneous expenses incurred on harbor boats, such as laundry, removal of ashes, storage charges for small boats during the winter season, hire of divers' services, etc.; also for reimbursement of the Ordnance Department for 40 per cent of the cost of operation of the steamer *Ordnance* in providing additional boat service for the Quartermaster Corps. The increase of \$3,615.39 in this estimate over the cost for the fiscal year 1917 is necessary by reason of the fact that approximately one-quarter as many boats as are in operation at the present time will be added to the harbor boat service, and will be in operation during the entire fiscal year 1919.

Philippine Islands.—The estimate of the department authorities for this purpose is based on the actual cost for the fiscal year 1917, being \$4,000 greater than said cost, which it is assumed is necessary to meet additional requirements.

Item 236.—Consolidated.

[Estimate fiscal year 1919, \$1,019,408.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$953,908.00	.....	\$953,908.00	\$65,500.00	.....	\$65,500.00	\$1,019,408.00
Appropriated fiscal year 1918.....	633,666.00	.....	633,666.00	73,998.00	.....	73,998.00	707,664.00
Expended fiscal year 1917.....	691,358.17	\$498,866.40	1,190,224.00	60,500.00	.....	60,500.00	1,250,724.57

REMARKS.

United States.—This is a consolidation of the estimates submitted under subitems 236a to 236h, inclusive, and provides for the maintenance, operation, and upkeep of the vessels of the Harbor Boat Service engaged principally in Coast Artillery work, such as planting mines, laying and repairing fire-control cable, towing targets, vessel tracking, searchlight drills, and the like, which boats are known as "other vessels." When they can be spared from the duties above mentioned, these vessels are also utilized for transportation purposes. Their names, class, length, and service in which engaged are shown in the list hereto appended. The decrease in this estimate of \$236,316.57 as compared with the expenditures for the fiscal year 1917 is caused by the fact that during that fiscal year expenditures totaling \$498,866.40 were made for the construction of new vessels, no expenditures in this connection being anticipated during this fiscal year. This indicates that for the maintenance and operation of "other vessels" there will be an increase of \$262,549.83 for this fiscal year over the expenditures for the fiscal year 1917. It is necessary to provide for supplies and services for new boats under construction which will be in service during the fiscal year, it being believed that these will number approximately one-quarter of the number in service at the close of the fiscal year 1917. A full explanation of this increase is shown under the various subitems of this estimate.

Other vessels, United States.

Vessel.	Class.	Length (feet).	Service.
Jos. Henry.....	Cable steamer.....	160	L a y i n g & repairing cables.
Cyrus W. Field.....	.....do.....	121	Do.
Gen. Wm. M. Graham.....	Mine planter and cable steamer.	171	Under construction.
Gen. S. M. Mills.....	Mine planter.....	165	Mine planting practice work.
Gen. J. M. Schofield.....	.....do.....	165	Do.
Gen. R. T. Frank.....	.....do.....	165	Do.
Gen. E. O. C. Ord.....	.....do.....	165	Do.
Col. Geo. Armistead.....	.....do.....	150	Do.
Maj. Samuel Ringgold.....	.....do.....	150	Do.
Gen. Robt. Anderson ¹	Steam tug.....	98	Artillery practice work.
Gen. Richard Arnold ¹.....	.....do.....	98	Do.
Gen. R. B. Ayres ¹.....	.....do.....	98	Do.
Gen. J. M. Brannan ¹.....	.....do.....	98	Do.
Gen. Harvey Brown.....	.....do.....	98	Do.
Gen. G. W. Getty ¹.....	.....do.....	98	Do.
Gen. R. H. Jackson ¹.....	.....do.....	98	Do.
Gen. A. M. Randol ¹.....	.....do.....	98	Do.
Capt. Jas. Fornance ¹.....	.....do.....	98	Do.
Capt. Gregory Barrett ¹.....	.....do.....	98	Do.
Maj. A. G. Forse ¹.....	.....do.....	88	Do.
Capt. A. M. Wetherill ¹.....	.....do.....	88	Do.
Capt. C. W. Rowell ¹.....	.....do.....	86	Do.
Capt. T. W. Morrison.....	.....do.....	86	Do.
Maj. Evan Thomas ¹.....	.....do.....	105	Do.
Lieut. Geo. M. Harris ¹.....	.....do.....	105	Do.
Reno.....	.....do.....	96	Do.
Lieut. A. H. Cushing ¹.....	.....do.....	95	Do.

¹ Vessel performs some Quartermaster (transportation) work in addition to its Artillery duties.

Other vessels, United States—Continued.

Vessel.	Class.	Length (feet).	Service.
Gibbon.....	Steam tug.....	72	Loaned to Engineer Corps.
Lieut. W. L. Murphy.....	do.....	65	Artillery practice work.
Lieut. E. F. Koehler ¹	do.....	65	Do.
Lieut. A. W. Drew ¹	Steam launch.....	60	Do.
Capt. J. C. Gregg ¹	do.....	60	Do.
Lieut. W. H. Lee ¹	do.....	60	Do.
Lieut. W. E. Shipp ¹	do.....	60	Do.
Lieut. A. M. Augustin, jr. ¹	do.....	60	Do.
Capt. Connell ¹	do.....	60	Do.
Capt. B. M. Hartshorne ¹	do.....	60	Do.
Lieut. E. A. Bumpus.....	do.....	60	Do.
Gen. De Russy ¹	do.....	60	Do.
Col. Mitchell ¹	do.....	45	Do.
Lieut. Crosby ¹	do.....	40	Do.
Col. Ramsay ¹	Gasoline launch.....	30	Do.
Capt. W. H. Wilhelm ¹	do.....	60	Do.
Lieut. E. E. Downes ¹	do.....	60	Do.
Lieut. W. C. Neary ¹	do.....	60	Do.
Mansfield ¹	do.....	45	Do.
Pleasanton ¹	do.....	30	Do.
Lieut. Hallett ¹	do.....	33	Do.
Lieut. W. A. Sater.....	do.....	42	Do.
Whidby ¹	do.....	20	Do.
Distribution box boats 1 to 7.....	do.....	32	Do.
Distribution box boats 9 to 15.....	do.....	32	Do.
Distribution box boats 24 to 33.....	do.....	32	Do.
Distribution box boats L-34, L-35, L-36.....	do.....	64	Do.
Lieut. C. F. Conry ¹	do.....	36	Do.
Lieut. H. R. Adair ¹	do.....	36	Do.
Power mine yawls 1 to 24 and 26 to 39 inclusive.	do.....	20	Do.
Mine yawls 1 to 29, 31 to 35, 37 to 40, 42 to 49, and 62 to 75 inclusive.	Oar-propelled.....	20	Do.

¹ Vessel performs some Quartermaster (transportation) work in addition to its Artillery duties.

From the list above it will be noted that there were at the close of the fiscal year 1917, 6 mine planters, 1 combined mine planter and cable steamer, 2 cable steamers, 21 steam tugs, 22 steam and gasoline launches, 27 distribution box boats, 38 motor mine yawls, and 68 oar-propelled mine yawls in this branch of the harbor-boat service.

Philippine Islands.—In the Philippine Islands there are 11 vessels engaged in work similar to that being performed by vessels operated in the United States listed above, and the estimate submitted by the department authorities covers the maintenance, operation, and upkeep of these vessels in proper condition. The consolidated estimate of the Philippines Department is \$5,000 greater than the reported cost for the fiscal year 1917. Explanations under the various subitems show why this increase is necessary. From the following list it will be noted that there were 2 mine planters, 1 steam tug (auxiliary mine planter), 1 steam launch, and 7 gasoline launches in the Artillery branch of the Philippine harbor-boat service at the close of the fiscal year 1917.

Other vessels, Philippine Islands.

Vessel.	Class.	Length (feet).	Service.
General Henry Hunt.....	Mine planter.....	150	Mine planting practice work.
General Henry Knox.....	do.....	150	Do.
San Pedro.....	Steam tug.....	100	Artillery practice work.
Florida.....	Steam launch.....	71	Do.
Distribution box No. 1.....	Gasoline launch.....	65	Do.
Distribution box No. 2.....	do.....	65	Do.
Distribution box boats Nos. 17 to 22.....	do.....	32	Do.

Item 236a.—Purchase or construction of other vessels.

[No estimate for fiscal year 1919.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....
Appropriated, fiscal year 1918.....
Expended, fiscal year 1917.....	\$498,866.40	\$498,866.40	.....	.....	.....	\$498,866.40

Item 236b.—Repairs, other vessels.

[Estimate, fiscal year 1919, \$113,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$103,000.00	.....	\$103,000.00	\$10,000.00	.....	\$10,000.00	\$113,000.00
Appropriated, fiscal year 1918.....	94,500.00	.....	94,500.00	10,120.00	.....	10,120.00	104,620.00
Expended, fiscal year 1917.....	83,945.07	.....	83,945.07	8,000.00	.....	8,000.00	91,945.07

REMARKS.

United States.—This item provides for the accomplishment of absolutely necessary repairs and alterations to the vessels engaged in Coast Artillery work to maintain them in proper serviceable condition. This estimate is \$19,054.93 greater than the cost for the fiscal year 1917, but is required by reason of the fact that approximately one-quarter as many additional vessels as are already engaged in artillery work, will be in service during the entire fiscal year 1919, upon which minor repairs, at least, will be required.

Philippine Islands.—The estimate submitted by the department authorities for this purpose is based on the reported cost for the fiscal year 1917.

Item 236c.—Fuel, other vessels.

[Estimate fiscal year 1919, \$153,750.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$141,750.00	.....	\$141,750.00	\$12,000.00	.....	\$12,000.00	\$153,750.00
Appropriated fiscal year 1918.....	100,000.00	.....	100,000.00	12,000.00	.....	12,000.00	112,000.00
Expended fiscal year 1917.....	113,064.45	.....	113,064.45	12,000.00	.....	12,000.00	125,064.45

REMARKS.

United States.—Funds included in this item provide for the payment of accounts rendered for the supply of all fuel (coal, fuel oil, and gasoline) required for the operation of that portion of the harbor boat service engaged in artillery work. Fuel is obtained under annual contracts awarded as the result of competitive bidding. The increase

of \$28,685.53 in this estimate over the cost for the fiscal year 1917 is necessitated by reason of the fact that approximately one-quarter more vessels than are in service at the present time will be in service during the entire fiscal year 1919.

Philippine Islands.—The estimate submitted by the department authorities for this purpose is the same as the reported cost for the fiscal year 1917.

Item 236d.—Supplies, other vessels.

[Estimate fiscal year 1919, \$78,750.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$68,750.00	.....	\$68,750.00	\$10,000.00	.....	\$10,000.00	\$78,750.00
Appropriated fiscal year 1918.....	55,000.00	.....	55,000.00	13,000.00	.....	13,000.00	68,000.00
Expended fiscal year 1917..	57,247.88	.....	57,247.88	7,000.00	.....	7,000.00	64,247.88

REMARKS.

United States.—Funds included in this estimate are intended to provide for the purchase of all running supplies (except fuel and water) as well as equipment required for the maintenance and operation of such vessels of the harbor boat service as are engaged in artillery work. The increase of \$11,502.12 in this estimate over the cost for the fiscal year 1917 provides for the purchase of supplies for the maintenance and operation of approximately one-quarter more vessels than are in service at the present time, which vessels are now under construction.

Philippine Islands.—The estimate submitted by the department authorities for this purpose is \$3,000 greater than the cost for the fiscal year 1917 and is assumed that this amount is included to take care of the constantly increasing cost of supplies.

Item 236e.—Employees, other vessels.

[Estimate fiscal year 1919, \$531,033.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$498,033.00	.....	\$498,033.00	\$33,000.00	.....	\$33,000.00	\$531,033.00
Appropriate fiscal year 1918.....	365,366.00	.....	365,366.00	38,628.00	.....	38,628.00	403,994.00
Expended fiscal year 1917.....	322,650.88	.....	322,650.88	33,000.00	.....	33,000.00	355,650.88

REMARKS.

United States.—This item provides for the payment of crews and other employees of vessels of the harbor-boat service engaged in artillery work. The number of these employees, with their grades and the rates allowed, as of July 1, 1917, is shown in the following table. The estimate is \$175,382.12 greater than the actual cost for the fiscal year 1917, but provides for the employment of crews on additional vessels which will be in operation during the fiscal year 1919; also, for the payment of the crews of all vessels in the service at existing commercial rates paid on vessels of practically the same size and type, which rates will, in all probability, be greatly increased over the rates now in existence.

EMPLOYEES, UNITED STATES, PAID FROM ITEM 236c.

	Rate.	Total.		Rate.	Total.
1 boatswain.....	\$990.00	\$990.00	6 firemen.....	\$900.00	\$5,400.00
Do.....	792.00	792.00	4 firemen.....	858.00	3,432.00
Do.....	871.20	871.20	Do.....	828.00	3,312.00
Do.....	660.00	660.00	2 firemen.....	844.80	1,689.60
1 cabin boy.....	623.70	623.70	Do.....	806.40	1,612.80
1 coal passer.....	943.80	943.80	4 firemen.....	805.20	3,220.80
1 cook.....	914.10	914.10	2 firemen.....	792.00	1,584.00
2 cooks.....	756.00	1,512.00	4 firemen.....	732.00	2,928.00
1 cook.....	712.80	712.80	7 firemen.....	660.00	4,620.00
Do.....	648.00	648.00	2 firemen (marine).....	720.00	1,440.00
Do.....	480.00	480.00	1 master.....	2,286.90	2,286.90
1 coxswain.....	1,020.00	1,020.00	2 masters.....	2,280.00	4,560.00
4 deck hands.....	863.50	3,454.00	1 master.....	2,055.90	2,055.90
8 deck hands.....	816.00	6,528.00	Do.....	1,980.00	1,980.00
9 deck hands.....	780.00	7,020.00	Do.....	1,848.00	1,848.00
7 deck hands.....	768.00	5,376.00	Do.....	1,760.00	1,760.00
6 deck hands.....	739.20	4,435.20	2 masters.....	1,680.00	3,360.00
3 deck hands.....	726.00	2,178.00	5 masters.....	1,659.00	8,295.00
11 deck hands.....	712.80	7,840.80	Do.....	1,580.00	7,900.00
4 deck hands.....	672.00	2,688.00	1 master.....	1,512.00	1,512.00
6 deck hands.....	660.00	3,960.00	4 masters.....	1,323.00	5,292.00
16 deck hands.....	600.00	9,600.00	11 masters.....	1,260.00	13,860.00
1 deck hand.....	528.00	528.00	1 master.....	945.00	945.00
Do.....	360.00	360.00	Do.....	900.00	900.00
2 engineers (chief).....	2,100.00	4,200.00	1 mate.....	1,801.80	1,801.80
1 engineer (chief).....	1,680.00	1,680.00	Do.....	1,386.00	1,386.00
1 engineer.....	2,148.30	2,148.30	2 mates.....	1,323.00	2,646.00
2 engineers.....	1,764.00	3,528.00	1 mate.....	1,080.00	1,080.00
1 engineer.....	1,680.00	1,680.00	2 mates, first.....	1,680.00	3,360.00
2 engineers.....	1,580.00	3,160.00	2 mates, second.....	1,380.00	2,760.00
5 engineers.....	1,575.00	7,875.00	2 oilers.....	943.80	1,887.60
1 engineer.....	1,512.00	1,512.00	4 oilers.....	996.00	3,984.00
5 engineers.....	1,500.00	7,500.00	2 oilers.....	871.20	1,742.40
1 engineer.....	1,449.00	1,449.00	Do.....	828.00	1,656.00
2 engineers.....	1,323.00	2,646.00	1 oiler.....	844.80	844.80
10 engineers.....	1,260.00	12,600.00	2 oilers.....	858.00	1,715.00
1 engineer.....	1,080.00	1,080.00	1 oiler.....	806.40	806.40
1 engineer (marine).....	1,080.00	1,080.00	Do.....	792.00	792.00
1 engineer (assistant).....	1,663.20	1,663.20	Do.....	756.00	756.00
2 engineers (assistant).....	1,500.00	3,000.00	4 oilers.....	720.00	2,880.00
1 engineer (assistant).....	1,386.00	1,386.00	2 pantrymen.....	456.00	912.00
Do.....	1,140.00	1,140.00	1 steward.....	1,059.30	1,059.30
2 firemen.....	943.80	1,887.60	2 stewards.....	876.00	1,752.00
6 firemen.....	936.00	5,616.00			

Philippine Islands.—The estimate submitted by the department authorities for this purpose is the same as the reported cost for the fiscal year 1917. The statement below shows the number, grades, and rates of pay of these employees.

	Rate.	Total.		Rate.	Total.
1 boatswain.....	\$650.00	\$650.00	2 engineers.....	\$1,080.00	\$2,160.00
Do.....	828.00	8 8.00	2 firemen.....	936.00	1,872.00
4 cabin boys.....	450.00	1,800.00	2 masters.....	1,680.00	3,360.00
2 carpenters.....	1,200.00	2,400.00	2 mates.....	1,560.00	3,120.00
1 clerk.....	1,400.00	1,400.00	4 oilers.....	858.00	3,432.00
Coal passers.....	780.00	780.00	2 stewards.....	876.00	1,752.00
Cook.....	540.00	540.00	6 quartermasters.....	180.00	1,080.00
2 cooks.....	618.00	1,236.00	2 watchmen.....	1,184.00	2,368.00
Do.....	600.00	1,200.00			
2 deck hands.....	816.00	1,632.00			
Do.....	660.00	1,320.00			
			Total.....		33,000.00

Item 236g.—Water, other vessels.

[Estimate fiscal year 1919, \$2,562.50.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$2,312.50	.....	\$2,312.50	\$250.00	.....	\$250.00	\$2,562.50
Appropriated fiscal year 1918..	1,600.00	.....	1,600.00	250.00	.....	250.00	1,850.00
Expended fiscal year 1917.....	1,787.35	.....	1,787.35	250.00	.....	250.00	2,037.35

REMARKS.

United States.—Fresh water for boiler and other uses for these vessels is purchased from funds included in this item. The increase of \$525.15 over the actual cost for the fiscal year 1917 is required for the procurement of fresh water for new vessels under construction.

Philippine Islands.—The estimate submitted by the department authorities is based on the reported cost for the fiscal year 1917.

Item 236g.—Charter or hire of other vessels.

[Estimate, fiscal year 1919, \$135,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$135,000.00	.....	\$135,000.00	.....	.....	.....	\$135,000.00
Appropriated, fiscal year 1918.....	13,600.00	.....	13,600.00	.....	.....	.....	13,600.00
Expended, fiscal year 1917.....	108,776.06	.....	108,776.06	.....	.....	.....	108,776.06

REMARKS.

United States.—This item provides for the charter or hire of commercial vessels in place of or supplemental to the owned vessels, for towing targets, vessel tracking, searchlight drills, and other such service for the Coast Artillery. The present estimate is \$26,223.94 greater than the actual cost for the fiscal year 1917, but is required by virtue of war conditions necessitating the hire of a great number of vessels to supplement the owned service.

Philippine Islands.—No estimate.

Item 236h.—Miscellaneous expenses, other vessels.

[Estimate, fiscal year 1919, \$5,312.50.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$5,062.50	.....	\$5,062.50	\$250.00	.....	\$250.00	\$5,312.50
Appropriated, fiscal year 1918.....	3,600.00	.....	3,600.00	.....	.....	.....	3,600.00
Expended, fiscal year 1917.....	3,886.48	.....	3,886.48	250.00	.....	250.00	4,136.48

REMARKS.

United States.—Miscellaneous services not provided for in other items, such as hire of divers, storage charges during the winter months for small boats (of which a greatly increased number will be in service), rental of submarine signal apparatus, laundry service, and the like are paid from funds included in this estimate. The additional amount of \$1,176.02 estimated over the cost for the fiscal year 1917 is required by reason of the fact that a large number of additional vessels will be in service during the fiscal year 1919.

Philippine Islands.—The estimate submitted by the department authorities for this purpose is based on the reported cost for the fiscal year 1917.

Item 237.—Charter of vessels (consolidated).

[Estimate fiscal year 1919, \$341,420,000.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New con-struction.	Total.	Current require-ments.	New con-struction.	Total.	
Estimate.....	\$341,420,000.00	.....	\$341,420,000.00	.....	.....	.....	\$341,420,000.00
Appropriated fiscal year 1918.....	.....	.....	.....	.....	.....	.....	.....
Expended fiscal year 1917.....	1,986,921.74	.....	1,986,921.74	.....	.....	.....	1,986,921.74

REMARKS.

United States.—This is a new item included for the purpose of chartering, maintaining and operating continually during the fiscal year 175 ships of approximately 6,800 gross tons each, maintaining shore establishments at the various ports of embarkation, and reimbursing owners for possible losses due to submarining or otherwise destroying these vessels. It is anticipated to use these vessels for the movement of troops and supplies scheduled for transportation to oversea ports during the fiscal year, and the estimate is based upon the cost for the operation of vessels of the same class during the fiscal year 1917.

Philippine Islands.—No estimate.

Item 237a.—Charter.

[Estimated fiscal year 1919, \$147,600,000.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New con-struction.	Total.	Current require-ments.	New con-struction.	Total.	
Estimate.....	\$147,600,000.00	.....	\$147,600,000.00	.....	.....	.....	\$147,600,000.00
Appropriated fiscal year 1918.....	.....	.....	.....	.....	.....	.....	.....
Expended fiscal year 1917.....	1,390,846.69	.....	1,390,846.69	.....	.....	.....	1,390,846.69

REMARKS.

United States.—This item is new and provides for the charter of 150 vessels of approximately 6,800 gross tons each for the movement of troops, animals therefor, and freight and equipment pertaining thereto scheduled for transportation during the fiscal year 1919. The estimate is based on charter rates which prevailed at the close of the fiscal year 1917—\$12 per gross registered ton per month for each vessel.

Philippine Islands.—No estimate.

Item 237b.—Maintenance and operation chartered transports.

[Estimate fiscal year 1919, \$113,600,000.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New con-struction.	Total.	Current require-ments.	New con-struction.	Total.	
Estimate.....	\$113,600,000.00	.....	\$113,600,000.00	.....	.....	.....	\$113,600,000.00
Appropriated, fiscal year 1918.....	.....	.....	.....	.....	.....	.....	.....
Expended, fiscal year 1917.....	494,096.05	.....	494,096.05	.....	.....	.....	494,096.05

REMARKS.

United States.—This is a new item providing for the maintenance, operation, and upkeep of a fleet of approximately 150 chartered transports and 25 German interned ships during the entire fiscal year 1919 at a cost of approximately \$54,000 per month each. This amount was found by experience during the fiscal year 1917 to be the amount necessary to provide for the proper maintenance, upkeep and operation of these chartered ships. Subdivision for one vessel for one month being approximately as follows:

Fuel.....	\$12, 225.
Supplies.....	7, 500
Employees.....	19, 300
Water.....	165
Laundry.....	420
Pilotage.....	315
Stevedoring.....	2, 280
Removal of ashes.....	30
Painting and cleaning.....	350
Miscellaneous.....	755
Towage.....	50
Repairs.....	10, 610

Philippine Islands.—No estimate.

Item 237c.—Reimbursement for losses of chartered transports.

[Estimate fiscal year 1919, \$76,500,000.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New con-struction.	Total.	Current require-ments.	New con-struction.	Total.	
Estimate.....	\$76, 500, 000. 00	.....	\$76, 500, 000. 00	.....	.....	.....	\$76, 500, 000. 00
Appropriated, fiscal year 1918.....	.....	.....	.....	.....	.....	.....	.....
Expended, fiscal year 1917.....	.....	.....	.....	.....	.....	.....	.....

REMARKS.

United States.—This is a new item provided for the purpose of reimbursing the owners of vessels chartered for the movement of troops and supplies to overseas stations in accordance with schedule for the loss or destruction of same by submarines or otherwise. The estimate is based on the assumption that probably one-third of the 150 chartered vessels engaged in this service will be destroyed. It is stipulated in the charter parties entered into for these ships that in case of loss, the owner will be reimbursed in the amount of \$225 per gross ton measurement, or for 6,800 gross ton ships, \$1,530,000 each.

Philippine Islands.—No estimate.

Item 237d.—Shore establishments.

[Estimate, fiscal year 1919, \$3,720,000.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New construc-tion.	Total.	Current require-ments.	New construc-tion.	Total.	
Estimate.....	\$3, 720, 000. 00	.....	\$3, 720, 000. 00	.....	.....	.....	\$3, 720, 000. 00
Appropriated, fiscal year 1918.....	.....	.....	.....	.....	.....	.....	.....
Expended, fiscal year 1917.....	101, 979	.....	101, 979	.....	.....	.....	101, 979. 00

REMARKS.

United States.—This is a new item included to provide for the maintenance of shore establishments at the various ports of embarkation for the scheduled transportation of troops and impedimenta connected therewith. This estimate is based on the maintenance of the shore establishments listed below at estimated costs as indicated:

New York.....	\$720,000
Newport News.....	400,000
Philadelphia.....	400,000
Boston.....	400,000
Ports in France.....	1,000,000
Additional requirements, United States, 2 other ports, each \$400,000.....	800,000

It has not as yet been decided what ports in addition to the first four listed above will be established, but the scheduled transportation can not be effected entirely from New York, Newport News, Philadelphia, and Boston.

Philippine Islands.—No estimate.

WAR DEPARTMENT,
Washington, November —, 1917.

1. The urgent deficiency act, approved October 6, 1917, provides as follows:

"The Secretary of War is hereby authorized, under such regulations and in such manner as he may prescribe, to employ such portion of the appropriations made for transportation of the Army and its supplies as in his judgment may be necessary to defray the expenses of travel incurred by officers and enlisted men of foreign armies attached to the Army of the United States during the present emergency, and that those officers and enlisted men, who may have been performing duties in this connection, be reimbursed from this appropriation for the expenditures they have already been obliged to make."

2. Officers and enlisted men of foreign armies, attached to the Army of the United States during the present emergency, will be allowed, from and after November 1, 1917, a per diem in lieu of subsistence and lodgings, including baths, tips, and laundry work, commencing with the date of their departure from their foreign stations and terminating with the date of return thereto, both inclusive, as follows:

When living in towns or cities, or when traveling:

Officers.....	\$10
Noncommissioned officers.....	6
Orderlies.....	2

When living in camps or cantonments:

Officers.....	6
Noncommissioned officers.....	3
Orderlies.....	1

While actually traveling they will also be entitled to reimbursement of actual expenses, using the following as a basis of what is allowable:

(a) Fares upon railroads, steamers, or other usual modes of conveyance, including the actual cost of transportation of personal baggage whenever an extra charge is made therefor.

(b) Cost of seat in parlor car, one lower berth in sleeping car, or stateroom accommodations on steamer, where same are not included in the travel fare, and reasonable fees to porters or to stewards.

(c) Hire of special transportation, either by land or by water, where there are no regular means of conveyance. Ferriage, tolls, drivers' service, and horse keeping when transportation is hired.

(d) Transfer coach fare en route to and from depots and hotels, or when there are no such conveyances, moderate and necessary taxicab or hack hire not to exceed the authorized local rates, any cost of transfers of baggage, and reasonable fees to porters for handling baggage.

(e) All items of actual expenses authorized when traveling, are for travel by the shortest usually traveled routes, and expenses incurred by any deviation from the shortest usually traveled routes can not be considered as actual and necessary expenses.

3. In submitting accounts, War Department Form No. 330 or 330-a will be used, and when traveling expenses are claimed they will be itemized on the face of the voucher and a certified copy in duplicate of the letter or order directing or authorizing the travel attached to the voucher. In stating the voucher the printed columns thereon should be ignored, as should also the second printed certificate. The officer or enlisted man will certify on the voucher that the account is correct, and when traveling expenses are claimed that the amounts charged were actually paid by him.

Vouchers will be mailed by the officer to the department quartermaster of the territorial department in which he is located or to the depot quartermaster, Washington, D. C., for payment. Vouchers submitted by enlisted men will be approved by the proper commissioned officer of his army and disposed of by said officer in the same manner as he disposes of his own voucher.

4. Officers and enlisted men of foreign armies who have been attached to and performing duties with the Army of the United States for any period from the date of the declaration of war, April 6, 1917, to October 31, 1917, will submit on the voucher forms herein mentioned, using such additional attached sheets as may be necessary, a statement of their actual expenses, using the following as a basis of what is allowable:

When not traveling—

(a) The actual and necessary cost of meals, lodging, heat, light, baths, reasonable fees to waiters and bellboys, and the actual cost of laundry.

When traveling—

(b) Same items as set forth in subparagraphs a. b, c, and d, paragraph 2, adding thereto the actual cost of meals when not included in the charge for travel fare.

(c) The accounts for these past expenses will be sent to The Adjutant General of the Army for the consideration of the Secretary of War with a view to settlement by the depot quartermaster, Washington, D. C., of all items which may be approved by the Secretary of War. The accounts of enlisted men will be sent through the proper commissioned officer of their army, who will indorse thereon the amount which he considers properly allowable.

[336.4, A. G. O.]

By order of the Secretary of War:

JOHN BIDDLE,
Major General, Acting Chief of Staff.

Official:

H. P. MCCAIN,
The Adjutant General.

QUARTERMASTER BOATS (HIRE OF).

The list below gives the names of boats chartered in supplementing the present harbor-boat service or replacing those temporarily out of commission, the stations at which serving, their tonnage, the length of time they were in service, and the charter rate; these boats having been engaged in the performance of quartermaster duties.

In some cases, however, only general data in regard to hire has been received, and in these cases specific terms of hire can not be given.

Name.	Post.	Ton- nage.	Length of service.	Rate.
America.....	San Juan, P. R.....	.....	22 hours...	\$0. 50 per hour.
Arago.....	Fort Stevens.....	.....	7 days....	30. 00 per day.
Aspinwall.....	Panama.....	11	11 hours...	4. 60 per hour.
Atlanta.....	do.....	2	42 hours...	3. 00 per hour.
Atlantic.....	Washington Barracks.....	188	46 days....	50. 00 per day.
Bethel, Helen.....	Fort Dupont.....	62	6 days....	73. 00 per day.
Bunker, E.....	Fort Jay.....	40	2 days....	75. 00 per day.
Champion.....	Fort Adams.....	11	2 weeks...	200. 00 per week.
Carter, James C.....	Washington Barracks.....	26	1 day.....	50. 00 per day.
Caswell, H. S.....	Fort Slocum.....	114	49 days...	75. 00 per day.
Do.....	do.....	114	6 days....	100. 00 per day.
Conhita.....	San Juan, P. R.....	.....	1 day.....	10. 00 per day.
Gregory.....	Fort Washington.....	3	25 days...	10. 00 per day.
Gillen, Wm.....	New York depot.....	204	72 days...	75. 00 per day.
Hanson, Mary.....	Fort Adams.....	12	27 days...	30. 00 per day.
Holyoke.....	Hoboken.....	198	78 days...	125. 00 per day.
Hurst, T. C.....	Newport News.....	19	7 months..	400. 00 per month.
Johnson, A.....	New York depot.....	208	77 days...	50. 00 per day.
Do.....	do.....	208	122 days...	60. 00 per day.
Johnson, C.....	do.....	208	30 days...	60. 00 per day.
La Sultana.....	San Juan, P. R.....	6	12 hours...	. 50 per hour.
La Valley.....	Panama.....	12	13 hours...	20. 82 per hour.
Lillian.....	New York depot.....	174	13 days...	75. 00 per day.
Do.....	do.....	.....	76 days...	85. 00 per day.
Linwood.....	Fort Adams.....	20	106 days...	10. 00 per day.
Mary B.....	Panama.....	2	18 hours...	2. 00 per hour.
Margarita.....	do.....	4	31 hours...	5. 00 per hour.
Merchants, No. 7.....	Fort Warren.....	100	2 days....	25. 00 per day.
Navahoe.....	Fort Monroe.....	17	17 hours...	34. 90 per hour.
Neutral.....	New York depot.....	171	45 days...	75. 00 per day.
Do.....	do.....	.....	59 days...	85. 00 per day.
Princess.....	Fort Adams.....	8	1 week....	200. 00 per week.
Priscilla Mary.....	Fort Monroe.....	14	72 days...	35. 00 per day.
Pokancket.....	Fort Dade.....	130	42 days....	50. 00 per day.

Name.	Post.	Ton- nage.	Length of service.	Rate.
Porto Bello.....	Panama.....	102	1 hour....	\$15.00 per hour.
Psyche.....	do.....	2	46 hours...	3.00 per hour.
Queen City.....	New York depot.....	10	44 trips....	3.00 per trip.
Rowe, R.....	do.....	211	4 days....	75.00 per day.
Ruth.....	Panama.....	4	44 days....	3.00 pr day.
Salvor (Q. M. and Art.).....	Fort Warren.....	180	10 days....	50.00 per day.
Saunders, John A.....	Fort Adams.....	192	2½ months.	774.00 per month.
Do.....	do.....		1 month....	1,050.00 per month.
Shamrock.....	Fort Liscum.....		11 days....	10.00 per day.
Startle and Maude.....	Fort Williams.....	46	138 days...	75.00 per day.
Severn.....	Fort Howard.....	113	14 days....	50.00 per day.
Stevens, R. L.....	New York depot.....	165	44 days....	55.00 per day.
S-5, S-7, and tug Isabella.....	Fort Constitution.....		2 days....	40.00 per day.
Tango.....	Fort Mason.....	40	21 days....	60.00 per day.
Tydings, Naomi.....	Fourth Maryland Infantry.....		131 days...	7.00 per day.
Typhon.....	Fort Liscum.....	10	9 trips....	5.00 per trip.
Utility.....	Fort Adams.....	47	3 days....	40.00 per day.
Volunteer.....	Washington Barracks.....	52	14 days....	20.00 per day.
Wakefield.....	Fort Washington.....	571	87 days....	100.00 per day.
Do.....	do.....	571	51 days....	150.00 per day.
Wolcott.....	New York depot.....	176	77 days....	75.00 per day.
No name.....	Fort Constitution.....		7 days....	5.00 per day.
Do.....	do.....		5 days....	21.66 per day.
20th Century.....	Fort Adams.....	12	50 days....	25.00 per day.
Millan Bros.....	New York depot.....	181	12 days....	75.00 per day.
Hire of derrick boats.....	do. ¹			7,773.83
Hire of passenger and freighter.....	do. ¹			22,830.57
Hire of barges.....				30,000.00
ARTILLERY BOATS.				
America.....	Newport News.....	10	44 trips....	3.00 per trip.
Catherine.....	Fort Morgan.....	(²)	8 days....	20.00 per day.
Colonel.....	Fort Warren.....	275	7 days....	60.00 per day.
Donna.....	Fort Barrancas.....	3	39 days....	6.00 per day.
Olsen, J. G.....	Fort Hancock.....	61	32 days....	120.00 per day.
Cutter, no name.....	Fort Constitution.....	10	44 trips....	3.00 per trip.
Motor launch, no name.....	Fort Monroe.....	(²)	1 day.....	12.00

¹ Formal agreement.² Artillery boats, tonnage not known.

OCTOBER 25, 1917.

Memorandum for personnel division.

It is desired that information as called for below be furnished not later than November 25, 1917.

- The wages paid masters and crews of—
 - Chartered transports.
 - German ships used as transports.
- The number and kind of technical organizations, Quartermaster Corps, authorized to date with authorized personnel of each.
- The number and grades enlisted men, Quartermaster Corps, other than technical organizations authorized to date, for—
 - Regular Army.
 - Enlisted Reserve Corps.
 - National Army.
- The number of officers and grades, Quartermaster Corps, commissioned and ordered to active duty, as follows:
 - Officers' Reserve Corps.
 - National Army.

The information called for must be furnished not later than the date specified.

HENRY G. SHARPE, *Quartermaster General.*

NOVEMBER 16, 1917.

Commanding General.

Quartermaster General.

Crews of German vessels used as transports.

- Reference letter O. Q. M. G., October 27, 1917, inclosed is statement, in duplicate, of the wages paid masters and crews of German ships operating as transports from this port of embarkation.

GROTE HUTCHESON,
Brigadier General, National Army.

By F. S. ARMSTRONG,
Colonel of Cavalry, Executive Officer.

Wages of crews of German ships operating as transports.

CLASS A.

“Bulgaria,” “Koln,” “Pennsylvania.”

1 master.....	\$275. 00	6 junior engineers.....	\$95. 00
1 chief officer.....	150. 00	1 refrigerating engineer.....	80. 00
1 second officer.....	140. 00	1 electrician.....	80. 00
1 third officer.....	130. 00	1 deck engineer.....	70. 00
1 fourth officer.....	120. 00	1 storekeeper.....	65. 00
6 cadet officers.....	50. 00	3 water tenders.....	65. 00
1 carpenter.....	75. 00	10 oilers.....	65. 00
1 carpenter's mate.....	70. 00	34 firemen.....	60. 00
1 boatswain.....	70. 00	Coal passers (if needed, indefi-	
1 boatswain's mate.....	65. 00	nite).....	50. 00
4 quartermasters.....	62. 50	1 chief steward.....	125. 00
26 able seamen.....	60. 00	1 second steward.....	70. 00
Ordinary seamen.....	40. 00	1 chief cook.....	100. 00
Deck boys.....	30. 00	1 second cook.....	75. 00
Ordinary seamen and deck boys,		2 third cooks.....	45. 00
at \$40 and \$30, respectively,		2 steam cooks.....	60. 00
hired when able seamen are		1 butcher.....	70. 00
not obtainable.		1 baker.....	90. 00
1 chief engineer.....	255. 00	1 second baker.....	60. 00
1 first assistant engineer.....	150. 00	7 messmen.....	45. 00
1 second assistant engineer.....	140. 00	1 pantryman (if needed)....	Indefinite.
1 third assistant engineer.....	130. 00	1 night watchman (if needed)	
1 fourth assistant engineer.....	110. 00	.....	Indefinite.

CLASS B.

“Shoshone,” “Suwanee,” “Teresa,” “Arcadia,” “Lucia,” “Erny.”

1 master.....	\$250. 00	1 boatswain.....	\$70. 00
1 chief officer.....	140. 00	3 quartermasters.....	62. 50
1 second officer.....	130. 00	12 able seamen.....	60. 00
1 third officer.....	120. 00	Ordinary seamen.....	40. 00
2 cadet deck officers.....	50. 00	2 deck boys.....	30. 00
1 carpenter.....	75. 00		

Ordinary seamen hired and paid \$40 per month when able seamen are not obtainable.

1 chief engineer.....	\$190. 00	1 chief steward.....	\$110. 00
1 first assistant engineer.....	140. 00	1 second steward.....	70. 00
1 second assistant engineer.....	130. 00	1 chief cook.....	90. 00
1 third assistant engineer.....	120. 00	1 second cook.....	75. 00
2 cadet engineers.....	50. 00	2 third cooks.....	45. 00
1 deck engineer.....	70. 00	1 baker.....	80. 00
12 firemen.....	60. 00	1 butcher.....	70. 00
6 coal passers.....	50. 00	2 steam cooks.....	60. 00
3 water tenders.....	65. 00	6 messmen.....	45. 00
3 oilers.....	65. 00	2 mess boys.....	40. 00
1 storekeeper.....	65. 00	1 quartermaster clerk.....	100. 00

All of above receive 50 per cent bonus in addition to pay for trans-Atlantic service.

In port, subsistence allowed as follows per day:

Master.....	\$2. 50	Electricians, refrigerating en-	
Chief officer.....	1. 50	gineers, and deck engineers..	\$1. 00
Second, third, fourth, and cadet		All engine department below	
officers.....	1. 00	above chief steward, chief	
All other deck department.....	. 75	cook, baker, and butcher.....	1. 00
Chief engineer.....	1. 75	All other steward's department.	. 75
First assistant engineer.....	1. 50		
Second, third, junior, and fourth			
engineers.....	1 3. 00		

¹ Per day in lieu of wages and subsistence.

NOVEMBER 24, 1917.

Memorandum for the Quartermaster General:

Attached hereto is information called for in memorandum for Personnel Division, October 25, 1917, copy herewith.

With reference to paragraph 1 (b), there are no German ships used as transports at any ports other than Newport News, Va.

D. L. BRAINARD,
Brigadier General, Quartermaster Corps, N. A.

[Nov. 22, 1917.]

Requisitioned vessels:	Gross tonnage	Requisitioned vessels—Con.	Gross tonnage
Antilles.....	6,878	Santa Rosa.....	6,415
Buenaventura.....	4,881	Santa Clara.....	6,309
Carolinian.....	4,170	Saratoga.....	6,391
Canto.....	3,820	San Jacinto.....	6,069
Calamares.....	7,782	Tenadores.....	7,782.63
City of Savannah.....	5,654	Tivives.....	5,017
City of Atlanta.....	5,433	Virginian.....	7,914
Dakotan.....	6,655	Interned Vessels:	
Ed. Luckenback.....	7,900	Arcadia.....	5,454
El Occidente.....	6,008	Artemas ex Bohemia.....	8,414
Eagle.....	6,274	Appeles.....	8,298
El Oriente.....	6,008	America (Amerika).....	22,622
El Sol.....	6,008	Agamemnon (Kaiser Wil-	
Ed Pierce.....	4,388	helm II).....	19,361
Florence Luckenback....	4,989	Aeolus (Grosse Kurfurst).	13,102
Floridian.....	6,930	Antigone (Neckar).....	9,835
Finland.....	12,222	Covington (Cincinnati)...	16,339
Geo. G. Henry.....	7,000	De Kalb (Prinz Eitel	
Honrick Hall.....	5,096	Friederick).....	8,797
Henrtt.....	5,399	Erny.....	6,615
Hilton.....	3,102	Geo. Washington.....	25,570
Havana.....	6,391	Huron (Friederick der	
Julia Luckenback.....	8,151	Grosse).....	10,771
Jean.....	3,126	Koln.....	7,409
Joseph Cudahy.....	3,250	Leviathan (Vaterland)....	54,282
Kentuckian.....	6,582	Martha Washington.....	8,312
Leirsa.....	2,118	Montpeier ex Bochum....	6,161
Lenape.....	5,179	Monticello ex O. J. D.	
Montanan.....	6,649	Ahlers.....	7,490
McClellan (by Quarter-		Mount Vernon (Kronprin-	
master Corps).....	3,227	zessin Cecilie).....	19,503
Montosa.....	3,063	Mercury (Barbarossa)....	10,984
Munplace.....	3,315	Madawaska (Konig Wil-	
Medina.....	5,426	helm II).....	9,410
Munwood.....	3,190	Nansemond ex Pennsyl-	
Moldegaard.....	2,735	vania.....	13,333
Munsomo.....	3,315	President Lincoln.....	18,168
Munalbro.....	4,293	President Grant.....	18,072
Mariana.....	3,063	P o c a h o n t a s (Prinzess	
Minnesotan.....	6,656	Irene).....	10,893
Mundale.....	3,285	Powhatan (Hamburg)....	10,531
Mallory, H. R.	6,063	Suwanee ex Mark.....	6,579
Momus.....	6,879	Susquehanna ex Rhein...	10,058
Neches.....	5,426	Teresa.....	3,769
Oregonian.....	5,648	Von Steuben (Kronprinz	
Panaman.....	6,655	Wilhelm.....	14,908
Pennsylvanian.....	6,655	Willehad.....	4,761
Pastores.....	7,781.7		

The only report of loss of transports is that of the *Antilles* with registered gross tonnage of 6,878. Under the terms of the charter this vessel from the Southern Pacific Co., the owners, were to be compensated at the rate of \$275 per ton, if the vessel was 12 years old or under. The records show that the *Antilles* was constructed at Philadelphia in 1907 making her 10 years old when she was lost, October 17, 1917, and it is estimated that the following payment will be necessary in this case: 6,878 tons, at \$275 per ton, \$1,891,450, with interest from October 17, 1917, to November 17, 1917, one month, at 6 per cent, \$9,457.25. Total, \$1,900,907.25.

ARMY APPROPRIATION BILL, 1919.

537

[illegible]

Army Transport Service employees, 234-E.

PACIFIC BOATS.

	Rate July 1, 1916.	Total	Rate July 1, 1917.	Total.
<i>Dock department.</i>				
7 agents.....	\$1,500.00	\$10,600.00	\$1,500.00	\$10,500.00
1 boatswain.....	840.00	840.00	840.00	840.00
6 boatswains.....	600.00	3,600.00	720.00	4,320.00
1 boatswain.....	540.00	540.00	720.00	720.00
4 boatswain mates.....	540.00	2,160.00	660.00	2,640.00
1 boatswain mate.....	480.00	480.00	660.00	660.00
1 caretaker, chief.....	3,000.00	3,000.00	3,000.00	3,000.00
1 caretaker, first assistant.....	1,680.00	1,680.00	1,680.00	1,680.00
1 caretaker, second assistant.....	1,500.00	1,500.00	1,500.00	1,500.00
1 caretaker, third assistant.....	1,080.00	1,080.00	1,080.00	1,080.00
7 carpenters.....	600.00	4,200.00	750.00	5,250.00
4 clerks, quartermaster.....	1,200.00	4,800.00	1,200.00	4,800.00
4 clerks, freight.....	900.00	3,600.00	900.00	3,600.00
1 clerk, freight.....			900.00	900.00
2 clerks, freight and embalmer.....	900.00	1,800.00	900.00	1,800.00
2 deck boys.....	240.00	480.00	240.00	480.00
7 masters.....	3,000.00	21,000.00	3,300.00	23,100.00
1 master.....	2,750.00	2,760.00	2,760.00	2,760.00
8 master-at-arms.....	480.00	3,840.00	660.00	5,880.00
1 master-at-arms.....	600.00	600.00	660.00	660.00
7 officers, first.....	1,500.00	10,500.00	1,680.00	11,760.00
1 officer, first.....	1,560.00	1,560.00	1,560.00	1,560.00
7 officers, second.....	1,140.00	7,980.00	1,380.00	9,660.00
7 officers, third.....	960.00	6,720.00	1,200.00	8,400.00
6 officers, fourth.....	840.00	6,040.00	1,020.00	6,120.00
1 officer, fourth.....			1,020.00	1,020.00
1 pilot.....			2,100.00	2,100.00
4 seamen.....	480.00	59,520.00	660.00	81,840.00
10 seamen.....	600.00	6,000.00	600.00	6,000.00
4 seamen.....	780.00	3,120.00	780.00	3,120.00
15 seamen.....	420.00	6,300.00	660.00	9,900.00
33 seamen.....			660.00	21,120.00
5 storekeepers.....	540.00	2,700.00	660.00	3,300.00
2 storekeepers.....	480.00	960.00	660.00	1,320.00
28 wheelmen.....	540.00	15,120.00	660.00	18,480.00
4 wheelmen.....	600.00	2,400.00	660.00	2,640.00
6 yeomen.....	600.00	3,600.00	660.00	3,960.00
Total.....		199,980.00		267,870.00
<i>Engine department.</i>				
84 coal passers.....	420.00	35,280.00	540.00	45,360.00
12 coal passers.....	420.00	5,040.00	660.00	7,920.00
3 coal passers.....	480.00	1,440.00		
5 coal passers.....	600.00	3,000.00	600.00	3,000.00
7 engineers, chief.....	2,100.00	14,700.00	2,310.00	16,170.00
1 engineer, chief.....	2,160.00	2,160.00	2,160.00	2,160.00
1 engineer, chief.....	2,280.00	2,280.00	2,280.00	2,280.00
1 engineer, chief, refrigerator.....	840.00	840.00	924.00	924.00
2 engineers, first assistant.....	1,680.00	3,360.00	1,680.00	3,360.00
7 engineers, first.....	1,500.00	10,500.00	1,680.00	11,760.00
1 engineer, first assistant.....	1,560.00	1,560.00	1,560.00	1,560.00
1 engineer, assistant refrigerator.....		720.00		792.00
1 engineer, assistant refrigerator.....		600.00		792.00
6 engineers, second assistant senior.....	1,260.00	7,560.00	1,560.00	9,360.00
2 engineers, second assistant senior.....	1,260.00	2,520.00		
1 engineer, second assistant junior.....			1,440.00	1,440.00
4 engineers, second assistant junior.....	1,260.00	5,040.00	1,440.00	5,760.00
1 engineer, second assistant senior.....			1,560.00	1,560.00
19 engineers, third.....	1,020.00	19,380.00	1,380.00	26,220.00
5 engineers, deck.....	720.00	3,600.00	840.00	4,200.00
6 engineers, refrigerator.....	840.00	5,040.00	924.00	5,544.00
4 engineers, refrigerator, assistant.....	720.00	2,880.00	792.00	3,168.00
5 electricians.....	840.00	4,200.00	924.00	4,620.00
5 electricians, assistant.....	720.00	3,600.00	792.00	3,960.00
2 electricians.....	780.00	1,560.00	924.00	1,848.00
112 firemen.....	540.00	60,480.00	660.00	73,920.00
3 firemen.....	720.00	2,160.00	720.00	2,160.00
2 firemen.....	900.00	1,800.00	900.00	1,800.00
4 firemen.....	600.00	2,400.00	660.00	2,640.00
33 oilers.....	540.00	17,820.00	660.00	21,780.00
1 machinist.....	720.00	720.00	720.00	720.00
2 machinists.....	900.00	1,800.00	900.00	1,800.00
6 machinists.....	660.00	3,960.00	660.00	3,960.00
6 plumbers.....	780.00	4,680.00	864.00	5,184.00
1 plumber, assistant.....	660.00	660.00	660.00	660.00
4 storekeepers.....	600.00	2,400.00	660.00	2,640.00

Army Transport Service employees 234-E—Continued.

PACIFIC BOATS—Continued.

	Rate July 1, 1916.	Total.	Rate July 1, 1917.	Total.
<i>Engine department—Continued.</i>				
1 storekeeper.....	\$540 00	\$540 00	\$660.00	\$660.00
1 storekeeper, engineer.....	600 00	600 00	660.00	660.00
18 water tenders.....	660 00	11,880.00	660.00	11,880.00
3 wipers.....			660.00	1,980.00
Total.....		248,760.00		296,202.00
<i>Steward department.</i>				
1 baker, chief.....	900.00	900.00	1,080.00	1,080.00
6 bakers, chief.....	840.00	5,040.00	1,080.00	6,480.00
1 baker, second.....			750.00	750.00
5 bakers, second.....	600.00	3,000.00	750.00	3,750.00
4 bakers, third.....	540.00	2,160.00	540.00	2,160.00
4 bakers, fourth.....	480.00	1,920.00	480.00	1,920.00
4 bathroom men.....	300.00	1,200.00	420.00	1,680.00
4 barbers.....	60.00	240.00	60.00	240.00
13 bell boys.....	180.00	2,340.00	180.00	2,340.00
2 bell boys.....			180.00	360.00
7 butchers, chief.....	720.00	5,040.00	840.00	5,880.00
4 butchers, second.....	510.00	2,040.00	540.00	2,160.00
1 butcher, second.....			540.00	540.00
4 butchers, third.....	450.00	1,800.00	480.00	1,920.00
5 cooks, chief.....	840.00	4,200.00	1,080.00	5,400.00
5 cooks, second.....	600.00	3,000.00	900.00	4,500.00
2 cooks, second.....	720.00	1,440.00	900.00	1,800.00
5 cooks, third.....	540.00	2,700.00	720.00	3,600.00
1 cook, third.....			720.00	720.00
4 cooks, fourth.....	480.00	1,920.00	600.00	2,400.00
5 cooks, ship's.....	600.00	3,000.00	720.00	3,600.00
4 cooks, fifth.....	420.00	1,680.00	540.00	2,160.00
4 cooks, chief, Army.....	720.00	2,880.00	840.00	3,360.00
4 cooks, second, Army.....	600.00	2,400.00	720.00	2,880.00
4 cooks, third, Army.....	480.00	1,920.00	540.00	2,160.00
4 cooks, fourth, Army.....	420.00	1,680.00	480.00	1,920.00
1 cook, first, steam galley.....			780.00	780.00
2 cooks, chief, steam galley.....	900.00	1,800.00	1,080.00	2,160.00
1 cook, second, steam galley.....			540.00	540.00
8 dishwashers.....	300.00	2,400.00	420.00	3,360.00
2 dishwashers.....			420.00	840.00
1 dishwasher.....	300.00	300.00		
4 janitors.....	300.00	1,200.00	420.00	1,680.00
7 messmen, first officers'.....	360.00	2,520.00	540.00	3,780.00
1 messman, second officers'.....	420.00	420.00		
1 messman, fireman's.....	240.00	240.00		
4 messmen, second officers'.....	300.00	1,200.00	480.00	1,920.00
9 messmen, petty officers'.....	300.00	2,700.00	420.00	3,780.00
2 messmen, petty officers'.....	420.00	840.00	420.00	840.00
1 messman, petty officer.....	420.00	420.00	480.00	480.00
1 messman, sailors'.....	240.00	240.00		
16 mess boys.....	240.00	3,840.00	420.00	6,720.00
2 mess boys.....			420.00	840.00
2 mess boys.....	360.00	720.00	420.00	840.00
1 mess boy.....	420.00	420.00	420.00	420.00
6 pantrymen, third.....	480.00	2,880.00	630.00	3,780.00
4 pantrymen, second.....	360.00	1,440.00	510.00	2,040.00
1 pantryman, second.....			510.00	510.00
4 pantrymen, third.....	300.00	1,200.00	450.00	1,800.00
4 pantrymen, second cabin.....	360.00	1,440.00	480.00	1,920.00
4 porters.....	360.00	1,440.00	540.00	2,160.00
1 steward.....	900.00	900.00	900.00	900.00
6 stewards, chief.....	1,350.00	8,100.00	1,440.00	8,640.00
6 stewards, second.....	600.00	3,600.00	610.00	4,860.00
4 stewards, cabin.....	540.00	2,160.00	600.00	2,400.00
4 stewards third.....	480.00	1,920.00	540.00	2,160.00
1 steward, third.....			540.00	540.00
1 steward, chief.....	1,344.00	1,344.00	1,440.00	1,440.00
4 stewardesses.....	300.00	1,200.00	330.00	1,320.00
1 stewardess.....			330.00	330.00
1 storekeeper, assistant.....			660.00	660.00
6 storekeepers.....	720.00	3,600.00	720.00	3,600.00
6 storekeepers, first assistant.....	600.00	3,600.00	660.00	3,960.00
4 storekeepers, second assistant.....	480.00	1,920.00	540.00	2,160.00
9 scullions.....	360.00	3,240.00	480.00	4,320.00
1 scullion.....	360.00	360.00		
2 scullions.....			480.00	960.00
4 silvermen.....	300.00	1,200.00	480.00	1,920.00
127 waiters.....	300.00	38,100.00	420.00	53,340.00
5 waiters.....	360.00	1,800.00	420.00	2,100.00
3 waiters.....	300.00	900.00		

Army Transport Service employees 234-E—Continued.

PACIFIC BOATS—Continued.

	Rate July 1, 1916.	Total.	Rate July 1, 1917.	Total.
<i>Steward department—Continued.</i>				
14 waiters.....			\$420.00	\$5,880.00
4 watchmen, night.....	\$360.00	\$1,440.00	450.00	1,800.00
2 watchmen, night.....	780.00	1,560.00	780.00	1,560.00
1 watchman, night.....	420.00	420.00	450.00	450.00
1 watchman, night.....			450.00	450.00
1 watchman, night.....	300.00	300.00	450.00	450.00
4 yeomen.....	360.00	1,440.00	480.00	1,920.00
Total.....		150,264.00		215,610.00
<i>Shore duty.</i>				
2 clerks, Quartermaster Corps.....	1,200.00	2,400.00	1,200.00	2,400.00
1 clerk, Quartermaster Corps.....			900.00	900.00
3 clerks, Quartermaster Corps.....	1,400.00	4,200.00	1,400.00	4,200.00
Do.....	1,200.00	3,600.00	1,200.00	3,600.00
1 clerk.....	1,000.00	1,000.00	1,000.00	1,000.00
Do.....	900.00	900.00	900.00	900.00
1 checker.....			936.00	936.00
1 carpenter, foreman.....	1,200.00	1,200.00	1,200.00	1,200.00
2 messengers.....	900.00	1,800.00	900.00	1,800.00
1 purveyor, Quartermaster.....	1,800.00	1,800.00	1,800.00	1,800.00
1 engineer, superintendent.....	3,000.00	3,000.00	3,000.00	3,000.00
1 engineer, assistant superintendent.....	2,460.00	2,460.00	2,460.00	2,460.00
1 engineer, superintendent.....	2,500.00	2,500.00	2,500.00	2,500.00
1 superintendent, acting marine.....	3,000.00	3,000.00	3,000.00	3,000.00
1 superintendent, assistant marine, chief stevedore.....	1,600.00	1,600.00	1,600.00	1,600.00
1 steward, post.....	1,800.00	1,800.00	1,800.00	1,800.00
4 watchmen.....	900.00	3,600.00	900.00	3,600.00
1 wharfinger, forage inspector.....	1,500.00	1,500.00	1,500.00	1,500.00
1 wharfinger, assistant and forage inspector.....	1,200.00	1,200.00	1,200.00	1,200.00
Total.....		37,560.00		39,396.00
RECAPITULATION.				
Engine department employees.....		248,760.00		296,202.00
Deck department employees.....		199,980.00		267,870.00
Steward department employees.....		150,264.00		215,610.00
Shore duty.....		37,560.00		39,396.00
Total wages, employees United States Army, trans- port service, Pacific coast.....		636,564.00		819,078.00

Employees transports, Atlantic coast.

No.	Positions.	Rate July 1, 1916.	Total.	Rate now authorized.	Total.
2	Masters.....	\$3,000.00	\$3,000.00	\$3,300.00	\$6,600.00
2	First officers.....	1,500.00	3,000.00	1,800.00	3,600.00
2	Second officers.....	1,260.00	2,520.00	1,680.00	3,360.00
2	Third officers.....	1,080.00	2,160.00	1,560.00	3,120.00
2	Fourth officers.....	960.00	1,920.00	1,140.00	2,280.00
2	Boatswain.....	660.00	1,320.00	840.00	1,680.00
2	Boatswain's mate.....	600.00	1,200.00	780.00	1,560.00
8	Wheelman.....	600.00	4,800.00	780.00	6,240.00
4	Master-at-arms.....	540.00	2,160.00	720.00	2,880.00
2	Storekeepers.....	600.00	1,200.00	720.00	1,440.00
2	Carpenters.....	600.00	1,200.00	900.00	1,800.00
2	Freight clerks.....	900.00	1,800.00	900.00	1,800.00
48	Seamen.....	540.00	25,920.00	720.00	34,560.00
<i>Engine department.</i>					
2	Chief engineers.....	2,200.00	4,200.00	2,700.00	5,400.00
2	First assistant engineers.....	1,500.00	3,000.00	1,800.00	3,600.00
2	Second assistant engineers.....	1,380.00	2,760.00	1,680.00	3,360.00
4	Third assistant engineers.....	1,260.00	5,040.00	1,560.00	6,240.00
2	Refrigerating engineers.....	840.00	1,680.00	1,140.00	2,280.00
2	Assistant refrigerating engineers.....	720.00	1,440.00	1,020.00	2,040.00
2	Deck engineers.....	720.00	1,440.00	900.00	1,800.00
2	Electricians.....	780.00	1,560.00	960.00	1,920.00
2	Assistant electricians.....	720.00	1,440.00	900.00	1,800.00
2	Plumbers.....	780.00	1,560.00	864.00	1,728.00

Employees transports, Atlantic coast—Continued.

No.	Positions.	Rate July 1, 1916.	Total.	Rate now authorized.	Total.
Engine department—Continued.					
2	Storekeepers.....	\$540.00	\$1,080.00	\$720.00	\$1,440.00
6	Water tenders.....	660.00	3,960.00	780.00	4,680.00
6	Oilers.....	600.00	3,600.00	780.00	4,680.00
30	Firemen.....	600.00	18,000.00	720.00	21,600.00
24	Coalpassers.....	480.00	11,520.00	600.00	14,400.00
Steward's department.					
2	Chief stewards.....	1,350.00	2,700.00	1,440.00	2,880.00
2	Second stewards.....	720.00	1,440.00	820.00	1,620.00
2	Third stewards.....	480.00	960.00	540.00	1,080.00
2	Storekeepers.....	720.00	1,440.00	720.00	1,440.00
2	First assistant storekeepers.....	600.00	1,200.00	660.00	1,320.00
2	Second assistant storekeepers.....	480.00	960.00	540.00	1,080.00
2	Chief cooks.....	1,140.00	2,280.00	1,080.00	2,160.00
2	Second cooks.....	660.00	1,320.00	900.00	1,800.00
2	Third cooks.....	540.00	1,080.00	720.00	1,440.00
2	Ship's cooks.....	480.00	960.00	720.00	1,440.00
2	Chief Army cooks.....	720.00	1,440.00	840.00	1,680.00
2	Second Army cooks.....	480.00	960.00	720.00	1,440.00
2	Third Army cooks.....	480.00	960.00	540.00	1,080.00
2	Chief bakers.....	900.00	1,800.00	900.00	1,800.00
2	Second bakers.....	480.00	960.00	750.00	1,500.00
2	Third bakers.....	480.00	960.00	540.00	1,080.00
2	Chief butchers.....	720.00	1,440.00	720.00	1,440.00
2	Second butchers.....	480.00	960.00	540.00	1,080.00
2	Third butchers.....	450.00	900.00	480.00	960.00
2	Chief pantrymen.....	480.00	960.00	540.00	1,080.00
2	Second pantrymen.....	420.00	840.00	420.00	840.00
2	Third pantrymen.....	360.00	720.00	360.00	720.00
2	First officers' messmen.....	420.00	840.00	420.00	840.00
2	Second officers' messmen.....	300.00	600.00	360.00	720.00
4	Petty officers' messmen.....	300.00	1,200.00	420.00	1,680.00
4	Sailor's messboy.....	300.00	1,200.00	420.00	1,680.00
4	Firemen's messboy.....	300.00	1,200.00	420.00	1,680.00
4	Scullions.....	300.00	1,200.00	300.00	1,200.00
4	Bellboys.....	180.00	720.00	180.00	720.00
2	Night watchmen.....	420.00	840.00	420.00	840.00
2	Bathroom men.....	300.00	600.00	420.00	840.00
4	Dishwashers.....	300.00	1,200.00	420.00	1,680.00
2	Porters.....	360.00	720.00	560.00	1,080.00
32	Waiters.....	360.00	11,520.00	420.00	13,440.00
2	Stewardesses.....	300.00	600.00	430.00	860.00
Grand total.....			167,160.00		206,108.00

Statement of increase in wages for deck and engine officers and crews of ocean steamships, January and July, 1917, as compared with rates in prior years.

AVERAGE SCALE OF WAGES PAID IN THE AMERICAN MERCHANT MARINE, PORT OF NEW ORLEANS, FOR VESSELS 1,500 TONS OR OVER.

	July, 1914.	July, 1916.	July, 1917.	Per cent of present schedule over—	
				1914	1916
Master.....					
First officer.....	\$100.00		\$155.00	55	
Second officer.....	70.00		145.00	107	
Third officer.....			130.00		
Fourth officer.....					
Carpenter.....	40.00		75.00	87.5	
Boatswain.....	35.00		70.00	100	
Seamen.....	30.00		60.00	100	
Chief engineer.....	100.00		205.00	105	
First assistant engineer.....	90.00		155.00	7.2	
Second assistant engineer.....			145.00		
Third assistant engineer.....			130.00		
Refrigerating engineers, senior.....			110.00		
Electricians.....					
Watertenders.....					
Oilers.....			70.00		
Fireman.....	40.00		65.00	62.5	

In positions where no war bonus is paid wages have been advanced from 25 to 33½ per cent in the coastwise trade. Advance for war zone trades from 75 to 100 per cent.

Statement of increase in wages for deck and engine officers and crews of ocean steamships, January and July, 1917, as compared with rates in prior years.

AVERAGE SCALE OF WAGES PAID OCEAN STEAMSHIPS OPERATING ON PACIFIC OCEAN.

	July, 1914.	July, 1916.	July, 1917.	Per cent of present schedule over—	
				1914	1916
Master.....	\$275.00	\$275.00	\$325.00	18.1	18.1
First officer.....	140.00	140.00	150.00	7.1	7.1
Second officer.....	115.00	115.00	125.00	8.6	8.6
Third officer.....	100.00	100.00	110.00	10	10
Fourth officer.....	85.00	85.00	95.00	11.7	11.7
Carpenter.....	65.00	65.00	70.00	7.6	7.6
Boatswain.....	60.00	60.00	65.00	8.3	8.3
Seamen.....	55.00	55.00	60.00	9.09	9.09
Chief engineer.....	195.00	195.00	210.00	7.6	7.6
First assistant engineer.....	140.00	140.00	150.00	7.1	7.1
Second assistant engineer.....	130.00	130.00	140.00	7.6	7.6
Third assistant engineer.....	115.00	115.00	125.00	8.6	8.6
Refrigerating engineers, senior.....	70.00	77.00	82.00	17.1	7.1
Electricians.....	70.00	77.00	82.00	17.1	7.1
Water tenders.....	55.00	55.00	60.00	9.09	9.09
Oilers.....	55.00	55.00	60.00	9.09	9.09
Firemen.....	55.00	55.00	60.00	9.09	9.09

AVERAGE SCALE OF WAGES PAID OCEAN STEAMSHIPS SAILING FROM NEW YORK, N. Y.

Master.....	\$250.00	\$275.00	\$275.00	10	.....
First officer.....	110.00	135.00	1 202.50	84.1	6.14
Second officer.....	90.00	120.00	1 172.50	91.7	58.3
Third officer.....	70.00	110.00	1 142.50	103.5	46.4
Fourth officer.....	60.00	90.00	1 135.00	125	75
Carpenter.....	1 52.50	75.00	1 112.50	114.2	50
Boatswain.....	40.00	70.00	1 105.00	162.5	87.5
Seamen.....	30.00	60.00	1 90.00	200	100
Chief engineer.....	200.00	1 281.25	1 337.50	68.75	23.125
First assistant engineer.....	125.00	1 187.50	1 225.00	80	30
Second assistant engineer.....	110.00	1 175.00	1 210.00	90.9	31.8
Third assistant engineer.....	85.00	1 162.50	1 195.00	129.4	38.2
Refrigerating engineers, senior.....	85.00	105.00	1 120.00	41.1	17.6
Electricians.....	60.00	1 100.00	1 120.50	100.83	34.1
Water tenders.....	55.00	55.00	65.00	18.1	18.1
Oilers.....	50.00	65.00	1 97.50	95	65
Firemen.....	45.00	1 65.00	1 97.50	116.6	72.2

1 Includes bonus.

AVERAGE SCALE OF WAGES PAID OCEAN STEAMSHIPS SAILING FROM THE PORT OF NEWPORT NEWS, VA.

Master.....					
First officer.....	\$100.00	\$125.00	\$187.50	87.5	62.5
Second Officer.....	80.00	110.00	172.50	115.6	78.1
Third officer.....	60.00	95.00	157.50	162.5	104.1
Fourth Officer.....					
Carpenter.....	45.00		75.00	67	
Boatswain.....	35.00	55.00	75.00	114.2	57.1
Seamen.....	30.00	45.00	62.50	108.3	58.3
Chief engineer.....	165.00	185.00	262.50	59	46.9
First assistant engineer.....	115.00	125.00	187.50	63.04	54.3
Second assistant engineer.....	100.00	110.00	172.50	72.5	62.5
Third assistant engineer.....	80.00	95.00	157.50	96.8	78.1
Refrigerating engineers, senior.....					
Electricians.....					
Water tenders.....	40.00		55.00	37.5	
Oilers.....	45.00	55.00	90.00	100	77.7
Firemen.....	40.00	50.00	68.75	71.8	46.8

Statement of increase in wages for deck and engine officers and crews of ocean steamships, January and July, 1917, as compared with rates in prior years—Continued.

Articles.	(a) Number contract- ed for Apr. 1 to Oct. 31, 1917.	(b) Number delivered Apr. 1 to Oct. 31, 1917.	(c) Number due under contracts Nov. 1, 1917.	(d) Average unit price.	(e) Total cost.
Wagons:					
Wagons, escort.....	54,778	10,774	44,004	\$190.00	\$10,407,820.00
Limbered combat wagons.....	7,000	116	6,884	602.26	4,215,820.00
Ambulances.....	3,339	393	2,946	389.00	1,298,871.00
Delivery: spring, 2-horse.....	100	.....	100	185.60	18,560.00
Sprinkling, 4-wheel.....	250	166	84	418.62	104,655.00
Drinking, 4-wheel.....	5,095	708	4,387	466.57	2,377,174.15
Mountain, 4-horse.....	800	417	383	210.64	168,512.00
Buckboards.....	163	12	151	130.00	21,190.00
Carts:					
Ration carts.....	3,600	.....	3,600	150.00	540,000.00
Dump carts.....	200	.....	200	81.75	16,350.00
Sanitary carts, 2-wheel.....	450	24	426	231.00	103,950.00
Medical carts.....	1,000	76	924	149.40	149,400.00
Harness:					
Escort or ambulance lead—s. s.....	165,736	40,834	124,902	26.50	4,392,004.00
Escort or ambulance wheel—s. s.....	165,536	40,755	124,781	29.50	4,883,312.00
Dump cart—s. s.....	4,500	.....	4,500	35.43	159,435.00
Buckboard—d. s.....	1,000	249	751	101.67	101,670.00
Spring wagon—d. s.....	10	9	1	79.90	799.00
Delivery wagon—s. s.....	30	30	.....	36.45	1,093.50
Aperej.....	10,000	10,000	.....	82.62	826,200.00
Blankets, saddle.....	59,400	27,197	32,303	5.62½	334,125.00
Bridles, riding.....	19,196	11,469	7,727	4.68	89,837.28
Saddles, riding.....	13,840	7,529	6,311	40.13	555,399.20
Total.....	.....	.....	.....	.....	30,766,177.13

SPARE PARTS AND ACCESSORIES CARRIED IN TOOL BOX OF ESCORT WAGON.

2 blocks, brake.	1 pickax and handle.
1 bolt, king.	150 feet rope, ½-inch.
6 bolts, tire, assorted.	1 wrench, monkey.
14 bolts, carriage, assorted.	1 twine, ball, pounds.
3 lin' s, open.	4 buckles, assorted.
2 nuts, axle.	2 clips, hame.
10 rivets, assorted.	1 hames, pairs.
1 singletree.	4 rings, harness, assorted.
1 ax and handle.	3 snaps, harness, assorted.
4 bags, nose.	3 straps, hame.
1 brush, horse.	½ gallon oil, neat's-foot.
1 comb, curry.	1 pound soap, harness.
4 grease, axle, pounds.	1 sponge.
4 halters and straps.	1 spool wire, stove.

SPARE PARTS NOT CARRIED IN TOOL BOX.

1 bucket, galvanized iron.	1 spade, short handled.
1 doubletree.	1 tongue, E. W.
1 lantern.	1 whip.
1 pole, coupling.	

NOVEMBER 23, 1917.

Memorandum for the Quartermaster General:

Subject: Narrative statement of the history of the standardization of military truck.

1. The Office of the Quartermaster General purchased two 1½-ton trucks in January, 1912, with a view of testing them in order to determine whether a suitable truck could be obtained to meet the needs of the Army.
2. In the fall of the same year Lieut. Col. C. B. Baker began to prepare standard specifications for the purchase of military motor trucks. With that end in view he communicated with various manufacturers of motor trucks and secured their suggestions and recommendations on the preparation of such specifications.

3. On May 7, 1913, standard specifications for the purchase of 1½-ton military motor trucks were completed in the office of the Quartermaster General, and a few trucks were purchased on those specifications. A copy of specifications for standard motor trucks for military use, dated May 7, 1917, is inclosed herewith, marked Inclosure No. 1. The specifications were revised on March 31, 1915, a copy of which are inclosed herewith, marked Inclosure No. 2.

4. The specifications were again revised in June, 1916, and separate specifications prepared for the furnishing of 1½-ton trucks and 3-ton trucks. A copy of each of the specifications referred to are inclosed herewith, marked Inclosures No. 3 and No. 4.

5. The specifications above referred to were prepared with the assistance of and in cooperation with the Society of Automobile Engineers. These specifications were again revised in May, 1917, and published in printed form, a copy of which are inclosed herewith marked Inclosure No. 5.

6. These specifications were prepared in cooperation with the Truck Standards Division of the Society of Automotive Engineers, and also in accordance with recommendations of the War Department, Motor Transport Board, which was composed of representatives of the various divisions of the War Department.

7. On February 3, 1916, Capt. W. M. Britton, engineer in the Quartermaster Department, submitted a memorandum to the Quartermaster General on the subject of truck standardization. The standardization referred to in that memorandum involved the complete design of all the elements of which trucks are composed and included the assembly of those units into a thoroughly standardized, thoroughly interchangeable truck. A copy of that memorandum is inclosed herewith marked Inclosure No. 6.

8. On June 21, 1917, a letter was addressed to Mr. Coker F. Clarkson, general manager of the Society of Automotive Engineers, requesting that the society endeavor to completely standardize motor trucks for military use. A number of meetings were held by the society and tentative drawings were made showing the chassis layout of 1½-ton and 3-ton trucks. A copy of letter referred to is inclosed herewith marked Inclosure No. 7.

9. After a number of meetings had been held by the Society of Automotive Engineers it became apparent that it would be necessary for the War Department to lend material assistance in this work of standardization in order to complete the work at an early date. With this end in view a memorandum was presented to Maj. Drake on July 14, 1917, on the subject "Policy Regarding Purchase of Motor Trucks," by a committee composed of A. W. Zimmerschied, metallurgist and engineer of the General Motors Co., Coker F. Clarkson, general manager of the Society of Automotive Engineers, and Capt. W. M. Britton. A copy of that memorandum is inclosed herewith marked Inclosure No. 8.

10. A copy of reply from the Quartermaster General to the letter from the General Munitions Board is also inclosed herewith, marked "Inclosure No. 49."

11. Under date of July 16, 1917, the Quartermaster General submitted a memorandum to the Chief of Staff on the subject of standardization of motor trucks and called attention to the very urgent necessity of immediately standardizing motor trucks for military use to the fullest possible extent and recommending that a sum of \$175,000 be immediately made available for use in connection with that work. A copy of the memorandum referred to is inclosed herewith, marked "Inclosure No. 10."

12. On July 21, 1917, a meeting was held at Columbus, Ohio, under the auspices of the Society of Automotive Engineers. All of the truck manufacturers of the country were invited to attend that meeting and were requested to bring their engineers with them. It was stated that important announcements would be made at that meeting in reference to the policy of the War Department regarding the purchase of motor trucks. The Army representatives at the meeting were Maj. C. B. Drake and Capt. W. M. Britton. During the meeting of the society at Columbus a very wide diversity of opinion as to the wisdom of the War Department embarking upon a program of standardization was expressed. After hearing the War Department's side of the question, as set forth by Maj. Drake and Capt. Britton, opposition to the program rapidly decreased, was finally overcome, and the convention went on record officially as thoroughly in accord with the movement and rendered every assistance possible in the prosecution of the work. The names of a large number of engineers present at the meeting who expressed their willingness to work in carrying out this program were taken.

13. On July 30, 1917, a number of engineers arrived at Washington and the actual work of truck standardization was commenced. A great deal of difficulty was at first experienced because of the lack of quarters, and also because of the lack of proper facilities for carrying on the work. These difficulties were gradually eliminated however, and the work was soon progressing in a very rapid manner. The design

of all of the truck assemblies was progressing rapidly, as stated above, on September 1, 1917.

14. The committees of the Society of Automotive Engineers which were in charge of the design of the various elements of trucks were represented in most instances by the majority of their membership in the group of engineers who came to Washington July 30, 1917. The chairmen of these various committees were constituted into an organization known as the schedule committee. This schedule committee was in effect a general executive committee, and decided not only the dates and order of procedure, but also the policy on important matters of design and contested opinions coming up between the different committees. This committee was under the chairmanship of A. W. Copeland, of Detroit, and Coker F. Clarkson, secretary.

15. The schedule committee at a meeting held on August 27, 1917, produced a schedule calling for the completion of the drawings for the Type "B," or 3-ton truck, by September 10, 1917. The completion of the parts according to the drawings was proposed for October 1, 1917. The assembly of two sample trucks was scheduled for October 10, 1917. It was understood that the Type "A," or 1½-ton truck, would follow behind the Type "B" truck by two weeks or more.

16. Portions of the larger units began to take definite form before September 1, and orders were sent to manufacturers to start production on some of the slower and more difficult portions at that time. By September 10 a considerable number of the larger parts were in process of preparation. On that date the committee in charge of the design of the engine, axles, transmission, steering gear, frame, springs, and chassis presented to Col. C. B. Baker at his office the drawings of those units showing the degree of completion which had been attained at that date. In all except the chassis design the work was shown to be upwards of 90 per cent complete September 10.

17. Between September 10 and October 1 the work of completing the drawings, checking them, combining them into the chassis design, and manufacture of the parts themselves went forward rapidly. September 20 sample parts began to be shipped from the various manufacturers to the two firms which had been selected to assemble the first two sample trucks. By October 1 practically all sample parts which had been promised by various manufacturers were completed and delivered to the assemblers, and the assemblers had completed the major portion of the small parts which had been assigned to them for manufacture in their own plants. The work of assembly proceeded rapidly and the first truck was actually assembled October 7, 1917, three days ahead of schedule. The second truck was finished about two days later.

18. The makers of the principal units which went into the first trucks were as follows:

Engines:

One from the Continental Motors Corporation, Detroit, Mich.

One from the Waukesha Motor Co., Waukesha, Wis.

Front and rear axles:

One set from the Timken-Detroit Axle Co., Detroit, Mich.

One set from the Sheldon Axle & Spring Co., Wilkes-Barre, Pa.

Transmissions, clutches, and controls:

Warner Gear Co., Muncie, Ind.

Covert Gear Co., Lockport, N. Y.

Wheels: Schwarz Wheel Co., Philadelphia, Pa.

Frame: A. O. Smith Corporation, Milwaukee, Wis.

Propeller shaft and universal joints: Spicer Manufacturing Co., South Plainfield, N. J.

Springs:

Standard Parts Co., Cleveland, Ohio.

William & Harvey Rowland (Inc.), Frankford, Pa.

Gasoline tanks: Gender, Paeschke & Frey Co., Milwaukee, Wis.

Seat: Edward Budd Manufacturing Co., Philadelphia, Pa.

Electrical equipment—generator, coil, distributor, and switch:

Dayton Engineering Laboratories Co., Dayton, Ohio.

Remy Electric Co., Detroit, Mich.

Kellogg Switchboard & Supply Co., Chicago, Ill.

Storage batteries:

Willard Storage Battery Co., Cleveland, Ohio.

Electric lamps:

Adams & Westlake Manufacturing Co., Chicago, Ill.

C. M. Hall Lamp Co., Kenosha, Wis.

Dash:

International Stamping Co., Detroit, Mich.

Hayes Manufacturing Co., Detroit, Mich.

19. The assembly of the two sample trucks was made by the Gramm-Bernstein Motor Truck Co., Lima, Ohio, and the Selden Motor Vehicle Co., Rochester, N. Y. The trucks, upon completion, were given short tests at the respective factories and were started for Washington overland. The truck produced by the Selden Motor Vehicle Co. reached Washington Sunday, October 13, 1917. The truck produced by the Gramm-Bernstein Motor Truck Co. reached Washington, Tuesday, October 16, having crossed the mountains in the first snowstorm of the season and encountering very bad weather. Neither truck had any breakdowns or mechanical difficulty other than slight running adjustments. Both trucks arrived in Washington in excellent condition.

20. The two sample trucks were formally presented to the Secretary of War for his inspection, on October 19, 1917, at which time a considerable gathering of Army officers and others who had been interested in the execution of this program were present, and addresses made by the Secretary of War and others.

21. A program of practical tests of the two sample trucks was begun October 21. During the first two weeks these tests were short runs in the vicinity of Washington, bringing the trucks in for frequent inspection, adjustment, and for study in connection with completion of production drawings. By November 10, these operations having been completed, the trucks went into a more vigorous testing schedule and the severity of which increased until about one hundred miles per day of heavy road work was exacted. These tests are still going on at this date. No serious weaknesses have been developed.

22. The production of the Class "B" or three-ton trucks on a commercial scale began with the letting of contracts for engines on October 11, 1917. Contracts for axles followed on October 12, 1917. Contracts for other parts of the trucks followed in rapid order so that by the middle of November all of the major units were under contract and some of them well along in the process of tool equipment. Contracts called for the production of the first parts by December 15 and the beginning of assembly on that date.

23. The Class "A," or 1½ ton truck was originally intended to be carried on the same schedule as the Class "B" with a difference of two weeks in date of finish. This schedule proved impracticable. Also the idea of the Class "A" engine design was changed after a conference held at the office of Gen. C. B. Baker, on October 3, 1917. At this conference it was decided to limit the weight of the truck chassis to 5,250 pounds and to design all parts of the truck to bring it to that ultimate weight.

24. An organization for the designing of the Class "A" truck was completed October 10, new committees being appointed for the chassis and various smaller units. The committees were composed in the main of three individuals each, selected from the larger groups who had operated in the design of the Class "B" truck. Operating with the experience gained in connection with the Class "B" design and having before them the results, smaller committees were able to accomplish the work with more efficiency. The design of the Class "A" truck was completed as to all major units on November 10, or 30 days from the organization of the committee. During this time the engine had been not only designed but detailed, constructed, and tested. Various other portions of the parts were also well along in process of manufacture. The completion of the chassis design was reached November 20, and contracts for the assembly of three sample trucks were given prior to that date. This work is now in process and it is expected that the three sample trucks will be constructed and operating by December 10, or 60 days from the beginning of the design. This truck, while following the general principles of the Class "B" truck differs from it radically in some units. An internal geared rear axle was used instead of a worm drive. The size of other vital units differed so that relatively few parts actually used on one truck are available for the other. The chief assistance therefore, in the design of the Class "A" truck was the experience gained in the Class "B" rather than in actual use of the parts.

25. On or about October 25 the motor transport engineering section was ordered to proceed with the design of a three-quarter ton light express truck, with pneumatic tires, and capable of speed of at least 30 miles per hour, for use by the Medical Corps, Signal Corps, and other Army organizations, and with possible future use by the Post Office and other civil organizations. The organization of a new set of committees to deal with this problem without diverting the attention of the other committees having in charge the work of the class "A" and class "B" trucks was necessary. The first session of the organization occurred on November 3, 1917. The problem presented to this committee required solutions entirely separate from those attained by the two preceding committees. At the present time this committee has the design of its chassis well along toward completion, and it is expected that the design will be complete December 15. Meanwhile, as in the preceding cases, orders for

the heavy parts have been given prior to the completion of the chassis design, and engines, axles, transmissions, and wheels, with possibly some other units, will be in production for samples by December 1. Based upon the experience in the two preceding cases, it is expected that this truck can be assembled by January 15, 1918, or about two months from the date of the beginning of the design.

26. The methods adopted in the work of standardization has proceeded along two lines. The larger units were, some of them, such that as a whole no patent or proprietary design was possible. In this case the committee could proceed to design what was needed without other thought than to secure the best efficiency for the purpose. Such units as the engine, front axles, transmission, clutch control, frame, wooden wheels, springs, and some other parts represent the group. The bumpers, towing hooks, sprags, gas tank, dash, seat, and many other parts of the truck were covered by patents or proprietary designs, and freer use of any desired feature by the committees was not open without negotiation. In this case it was necessary to create new designs or to design around difficulties. In this group fell the rear axles, especially their differentials and driving mechanisms; the steering gear, the radiators, the electric generator and other electric parts, the storage batteries, the lamps, the universal joints, the carburetors, the magnetos, the mufflers, steel wheels (both cast and pressed), the antiskid chains, and numerous other parts and accessories. The method adopted in the design of such units has been to call together by letter or telegram representatives of the principal manufacturers engaged in the production of that part, and to place the problem before them of creating for the military truck a design which should not infringe upon the patents or proprietary construction of any manufacturer, and which should at the same time function efficiently for the desired purpose. Nearly every committee thus far called, when first confronted with this request, considered it impossible, but on making a serious effort and abandoning the ordinary precautions of competitive business and pooling their ideas and efforts, the most astonishing success has been reached in group after group. The spirit displayed by these American manufacturers in abandoning their commercial rivalry and giving up their vested rights, and without selfish thought producing what is needed, has been absolutely unique in American industrial history, and too great praise can not be given them for the manner in which they have accomplished their tasks.

27. In conclusion, at this time it may be said that the benefits of standardization in facilitating procurements, reducing the ton-mileage of spare parts to be transported to the battle fields of Europe, simplification of the maintenance problem, and simplification of the problem of instructing personnel, are so great as to justify in many fold the expense in money and energy which have been used in the work, and it is believed that this same standardization should be carried on not only in the motor-transport work of all divisions of the Army, but also in connection with all other war material.

[Inclosure No. 1.]

SPECIFICATIONS FOR STANDARD MOTOR TRUCK FOR MILITARY USE.

Capacity: 1½ tons. Safe overload, 20 per cent.

Drive: Either two or four wheel, at option of builder; shaft driven.

Axles: Axle to which power is applied to be semifloating or full-floating type, at option of builder.

Motor: 32 to 40 horsepower, at option of builder, especially designed for heavy duty and with four cylinders cast en bloc, of the L-head type. Cylinders to be water cooled and cast of high grade cylinder iron. Dual ignition by magneto and battery. Motor to be preferably mounted on three-point suspension and placed under removable bonnet forward of driver. Motor placed under driver's seat will not be accepted.

Clutch: Cone, leather-faced, or multiple-disk, at builder's option.

Transmission: Selective type, four speeds forward and a reverse. Gear shaft and brake levers to be center control.

Speed: From 1 to 14 miles per hour.

Wheels: Wood, Artillery type, 36 inches in diameter, with demountable rims. Mud guards for front and rear wheels attached to frame. No running board.

Tires: Solid rubber, S. A. E. standard demountable, 36 by 4 inches, single or double, at option of builder. Double preferred on rear wheels.

Thread: 56 inches.

Wheel base: 120 to 144 inches, at option of builder.

Steering: Irreversible wheel, located at left side. Extra heavy.

Brakes: Two sets, both attached to rear wheels; one set operated by pedal, other by lever (center control). Brakes to be nonsparking and easily adjusted; the adjustments to be securely locked without removing wheels or other parts.

Springs: Semielliptic; best grade, oil tempered, chrome silica-manganese spring steel.

Frame: Pressed channel steel, heat treated.

Body length, width and depth: 3 feet 4 inches wide, 1 foot 9 inches deep; 9 feet 6 inches long at bottom and 10 feet at the top.

Body material: White oak, reinforced with angle iron.

Top: Collapsible seat over driver's seat, with side curtains.

Height of body platform from ground: Not to exceed 45 inches.

Ground clearance: 11 inches or more.

Weight: Complete, with body, empty, not to exceed 5,000 pounds.

Equipment: One prestolite gas headlight, located on dash, with directing device; two mineral oil lights and one mineral oil tail light. Horn, tools, oilers, etc.

Gasoline capacity: Twenty-five gallons, and 5 gallons in reserve.

Oil capacity: Three gallons.

Material and workmanship: All parts of the truck and motor with respect to quality of material, workmanship and mountings, should be in accordance with the latest technical developments, and should be as serviceable in winter as in summer.

Tests: The trucks should be so built as to stand any reasonable test that the Government may require in its military service, and should be able to perform service in any situation that can be performed by the regulation 4-mule escort wagon.

Proposed test: All proposals should state what tests can be made with the truck; and any tests made, it should be understood, will be with the full load carried, including the assistant to the chauffeur.

Engine speed: The normal number of revolutions per minute of the motor in the fourth speed, which corresponds to the highest speed, should be stated.

Arrangement and control: All principal parts of the motor truck, such as motor, clutch, transmission, control, drive, and all other mechanical parts must be conveniently arranged and easily accessible.

Quietness: The running of the truck must be with as little noise as possible.

Chassis: The chassis, wheels, seats, and upper construction must be so constructed as to meet the requirements of the specifications, and with the object above indicated in view.

Seats: Seats should be provided for a personnel of three, including the chauffeur. These seats should be protected from the weather by curtains and covers.

Cooling apparatus: The cooling apparatus, with water pumps, should have a capacity equal to the radius of the truck under ordinary conditions.

Water: The water used for cooling must be kept below the boiling point, and ample provisions should be made to prevent waste or slopping.

Standardization: All parts must be standardized and interchangeable for any given model.

Weight: The net weight of the completed and fully equipped truck, including gasoline tank, oil tank, water cooler, accessories, etc., and spare parts, including non-skid chains, should be indicated in the proposals submitted.

Pressure on rear axle: The pressure on rear axle when fully loaded and equipped should be stated by the maker.

General: Bidders should mention all features or details of design of any truck proposed by them differing from the description in the above specifications. They should also state what parts of the trucks are made at other shops than their own.

[Inclosure No. 2.]

SPECIFICATION FOR STANDARD MOTOR TRUCKS FOR MILITARY USE.

1. *General.*—The normal load capacity of the truck shall be 3,000 pounds, in addition to the body and all equipment, as specified herein, and it must safely carry 20 per cent overload. The range of speed shall be from 1 to 14 miles per hour. Trucks shall be either shaft driven, with two or four wheel drive or chain driven. They must be arranged for left side drive with center control, and all parts shall be so located as to be readily accessible for adjustment and repair.

2. *Dimensions, etc.*—Tread, 56 inches. Wheel base, not less than 120 inches. Ground clearance, not less than 11 inches. Height of floor of body from ground shall not exceed 45 inches.

3. *Gasoline and oil capacity.*—Gasoline capacity shall be not less than 15 gallons in main tank and 5 gallons in reserve tank. Oil capacity, not less than 3 gallons, exclusive of crank-case contents.

4. *Bodies.*—Bodies are not to be furnished unless specifically called for. The chassis shall be so designed that the standard Army escort wagon body, shown on drawing No. 2-1268, herewith, can be placed thereon.

5. *Standardization, etc.*—All parts must be standardized and interchangeable for a given make of truck, and bidders shall state in their proposals the manufacturer of such parts as are not made in the shops of the truck maker.

6. *Data with proposals.*—The following information must be furnished with each proposal: Illustrations, catalogues, and specifications showing the construction of the truck bid upon should also be submitted. Failure to supply these data may be considered to render the proposal informal and result in its rejection.

Name of manufacturer of motor.....
 Bore.....inches. Stroke.....inches.
 Number of piston rings.....
 Crank-shaft bearings:
 Number..... Type.....
 Size of each.....
 Antifriction metal used.....
 Diameter of crank shaft.....inches.
 Speed of motor corresponding to truck speed of 14 miles per hour.....r. p. m.
 Manufacturer and type of governor.....
 Manufacturer and type of carbureter.....
 Type of water-circulating pump.....
 Method of lubrication of motor.....
 Manufacturer and type of magneto.....
 Type of clutch.....
 Manufacturer and type of transmission.....
 Gear reduction, crank shaft to rear wheels:
 First speed.....; second speed.....
 Third speed.....; fourth speed.....
 Reverse.....
 Type of drive. (Shaft or chain).....
 Manufacturer of and type of drive axle or jack shaft.....

 Number of sprocket teeth on jack shaft.....
 (On rear wheels).....
 Manufacturer of tires.....
 Wheel base.....inches.
 Maximum depth of frame.....inches.
 Thickness of frame stock.....inches.
 Manufacturer and type of steering gear.....
 Type of brakes.....
 Manufacturer and brand of brake lining used.....

 Diameter and type of wheels.....
 Minimum ground clearance.....inches.
 Ground clearance of rear sprocket wheels.....inches.
 Shipping weight of chassis, including all accessories and spare parts as specified herein.....pounds.

Bidders should mention also all features or details of design different from these specifications. Unless this is done, the Government reserves the right to require strict adherence to the provisions of the specification.

7. *Motor.*—The motor shall be of the 4-cylinder, en bloc, 4-cycle, water-cooled type, not less than 32 horsepower S. A. E. rating, and must be placed under a removable bonnet forward of the driver. All bearings shall be so designed as to be easily adjusted to take up wear and all wrist pins, valve stems, push rods, etc., shall be properly bushed. Lower half of crank case to be removable without disturbing bearings; 3 point suspension motor is considered desirable for military use.

8. *Governor.*—A motor speed limiting governor of approved make shall be provided and adjusted so as to prevent the truck from exceeding a speed of 14 miles per hour on high gear. The governor shall be adjustable and have provision for sealing with ordinary lead seals after adjustment.

9. *Cooling system.*—The cooling water must be pump circulated and under operating conditions shall be maintained below the boiling point. Suitable provision shall be made to prevent slopping and waste. The system is to be so designed that

it may be completely drained to prevent freezing and may be flushed out when necessary for cleaning. Thermo-syphon systems will not be acceptable.

10. *Ignition*.—Two sources of ignition current must be provided; as approved high-tension magneto and dry batteries. Connections may be made either by the dual system, or with independent distributor for the battery current.

11. *Transmission*.—Selective type, three of four speeds forward and a reverse. Gear shaft and brake levers to be center control.

12. *Clutch*.—Leather-faced cone, or multiple disc.

13. *Wheels*.—Wheels shall be 36 inches in diameter, front and rear. All rear drive trucks to be provided with dual rear wheels and all wheels to be equipped with demountable rims.

14. *Tires*.—Solid rubber S. A. E. standard demountable, 36 by 4 inches, double on rear wheels.

15. *Fenders*.—Truck will be provided with front fenders only, which must be of suitable design and rigid construction.

16. *Running boards*.—There shall be no running boards. A suitable step will be provided to enable the driver to reach his seat.

17. *Brakes*.—Two sets of brakes shall be provided, both acting on the rear wheels; one operated by pedal, the other by lever. Brakes to be lined with an approved nonsparking material and so constructed that adjustments may be made and securely locked without removing wheels or other parts. Either set of brakes shall be capable of holding the fully loaded truck stationary on a 25 per cent grade. Brake rods are to be sufficiently stiff to prevent whipping or rattling and must be bushed at all pin connections.

18. *Muffler*.—A muffler of substantial design and so constructed that it may readily be taken down for cleaning shall be installed. It shall be provided with a foot operated cut-out and the tail pipe must discharge the exhaust gases in a truly horizontal direction.

19. *Seats, top, etc.*—Seats shall be proper width, for three persons and shall be provided with removable cushion and stationary back rest upholstered with best grade black pantasote, or equal, properly tufted. Top to be of collapsible type.

20. *Equipment*.—The following-named equipment is to be furnished with each chassis:

Prestolite, or equal, gas headlight mounted on dash with directing device, complete with large size gas tank, copper tubing, etc.

Side and tail oil lamps.

Mechanical, hand operated, diaphragm horn.

Swivel towing hooks fastened to frame at front and rear, each having a coil spring take-up of 1½ inches under a pull of 1,200 pounds.

Steel bumper consisting of curved channel or other suitable section properly mounted on frame of truck and so placed as not to interfere with the starting crank. Front towing hook may be secured to this bumper if so desired and satisfactory attachment is made.

Tire chains, Weed or equal, complete for all four wheels, with two dozen extra cross chains for same.

Tool kit with all necessary wrenches, pliers, screwdrivers, hammer, oilers, screw-action grease gun, two extra spark plugs, and jack.

Steel tool box, with lock, to hold all tools, tire chains, and all other tools mounted on running board. If dry batteries are carried in this box, a separate compartment to hold and prevent them from shaking about must be provided.

Combined speedometer and odometer, indicating rate of speed, trip and total mileage with reset for trip mileage; to be equal to the Stewart-Warner magnetic type.

Instruction books, oiling diagrams, with instructions for a complete understanding of the operation of the truck.

21. *Tests*.—Trucks will be inspected and tested at the factory under the direction of a representative of the Quartermaster Corps and notification shall be sent to the Quartermaster General of the Army when the machines are ready for such inspection. Trucks must be built to stand any reasonable test that the Government may require in its military service and satisfactory performance under test as to power, overheating, clutch, brake and governor action, quiet running, gasoline, oil and water consumption, will be required. Tests will be made with the truck under normal load, with allowance for weight of body, the driver and one other person, and all labor and materials necessary for the tests will be furnished by the contractor.

22. *Painting*.—Chassis are to be painted three coats of best lead and oil paint, olive drab color.

J. B. ALESHIRE,
Quartermaster General.

OFFICE QUARTERMASTER GENERAL, March 31, 1915.

[Inclosure No. 3.]

STANDARD SPECIFICATIONS FOR GASOLINE MOTOR TRUCKS, CAPACITY, 1½ TONS. PREPARED IN THE OFFICE OF THE QUARTERMASTER GENERAL, WASHINGTON, D. C., JUNE, 1916.

1. The number of trucks required will be stated in the "Instructions to bidders," issued by the purchasing quartermaster. The prices quoted will be f. o. b. factory, and the truck must be complete in every respect and in proper operating condition.

2. *Quality of materials.*—Except it be otherwise specified all materials are to be the best of their respective kinds, and all labor is to be done in the most thorough and workmanlike manner. In all cases where an article is mentioned in these specifications in connection with the words "best quality," "best make," "proper," or "suitable," the purchasing quartermaster or his authorized representative shall decide what is the best and most suitable to use.

3. *Award of contract.*—The trucks herein specified are to be used in the field service of the Quartermaster Corps. and in the selection of trucks and award of contract, the quality of material, design, workmanship, and suitability for use by the Quartermaster Corps in field service will be given due weight in determining which proposal shall be accepted.

4. *Manufacturers.*—Each bidder must submit a complete list of manufacturers and location of factories furnishing any part, either finished or unfinished, assembly, or accessory, which is used in the construction of the trucks, and not made in the factory where the trucks are constructed. This shall not be construed as including bar or sheet stock or structural material. If this information is not given, the proposal may be rejected, or in case the proposal is accepted, the Quartermaster Corps reserves the right to name the manufacturer and select the material, apparatus, parts, or accessories, and no others will be substituted for those named.

5. *Employment of convict labor.*—In the performance of work herein specified the contractor shall not, directly or indirectly, employ any person undergoing sentence of imprisonment at hard labor, which may have been imposed by a court of any State, Territory, or municipality having jurisdiction, nor permit such employment by any person furnishing labor or material to said contractor in fulfillment of this agreement.

6. *Patents.*—The contractor shall for all time secure to the Government the free and undisputed right to use any and all patented articles used in the work, and shall defend at his own expense any and all suits for infringement of any patent or patents, and in case of adverse claims under patents, the contractor shall pay all awards.

7. *Design.*—The truck must be of well balanced design, and the material and workmanship the highest standard employed in commercial practice. It must be constructed in the most substantial manner, and provided with a suitable spring suspension. All parts of truck must be so designed and constructed as to be readily accessible for adjustment or repair.

8. *Strength of parts.*—All parts of truck from motor to and including driving wheels must be of such size, material, design, and strength, as to readily transmit the full power of the motor at the different gear ratios, with a proper factor of safety, with a minimum wear on parts, and with maximum mechanical efficiency.

9. *Interchangeability of parts.*—All parts of trucks must be constructed to definite standard dimensions, and proper tolerances, so that any part of same may be replaced and properly fitted and adjusted without requiring additional tool work or machine work on the parts.

10. *Standard parts.*—It is desired that as many parts of the truck as practicable be constructed to standard sizes and design, which will be interchangeable with the same parts made by other manufacturers, or according to S. A. E. standards.

11. *Materials.*—A complete list of all materials used in the construction of the various parts of the truck must be given, together with the chemical composition and physical properties of same.

12. *Heat treatment.*—When necessary, all steel used in the construction of the truck must be heated to develop the best physical properties for the particular purpose for which the material is being used.

13. A complete description of the methods of heat treatment for various purposes and materials must be given, together with a description of the equipment for same.

14. All information in reference to the heat treatment will be considered confidential if so requested by the bidder.

15. *Drawings and data.*—Each bidder will be required to submit complete dimensioned detail and assembly drawings, showing the size and construction of every part of the truck. These drawings must show the shop limits on all parts, and a reference

number or letter referred to the list of materials, physical properties, and heat treatment, which list will also be submitted with the proposal. The drawings must be arranged in proper order for filing, and provided with a suitable index which will enable any individual drawing to be readily located. The drawings and data above referred to will not be opened publicly with the proposals, but will be considered confidential. The drawings and data may be submitted direct to the Quartermaster General, Washington, D. C., and should be referred to in each proposal which is submitted.

16. If the drawings and data herein required are on file in the Office of the Quartermaster General, they need not again be submitted with the proposal. If any major changes have been made in the construction of the truck, materials used, or methods of heat treatment since the drawings and data were submitted, details of those changes should be submitted with the proposal.

17. *Service stations.*—Complete information regarding the location of all service stations, the floor area of each station, and the number of men employed in each service station, should be submitted with the proposal.

18. *Departure from specification requirements.*—In case the vehicle on which proposal is submitted does not comply with these specifications, in every particular, the bidder must state definitely in what particular the vehicle which he proposes to furnish does not comply with specification requirements.

19. *Guarantee.*—Each bidder will be required to guarantee his vehicle or vehicles against defects in material or workmanship for a period of one year. This guarantee shall include the delivery of the defective part or parts to any point in the United States. After the installation of the new part, the defective part will be returned to the manufacturer if he so requests. The manufacturer will pay the transportation charges on all returned parts.

20. The above guarantee shall also apply to all parts and accessories which are not made by the bidder.

21. *Load capacity.*—The carrying capacity of trucks in pay load shall be their rating in tons, and they shall be of sufficient strength and provided with sufficient power to carry and propel a gross load of 5,100 pounds under the most severe service conditions, with a proper factor of safety.

22. *Road speed.*—The governor on engine shall be set so as to give a road speed of 14 miles per hour, with a maximum governed engine speed of 1,300 revolutions per minute.

23. *Location of control.*—The speed-change lever and steering wheel must be located in such a manner as to give either left-hand drive with center control, or right-hand drive with right hand control.

24. *Type of drive.*—The trucks may be provided with any suitable standard type of drive, such as internal gear, bevel gear, worm gear, or chain drive.

25. Preference will be given to that type of final drive which provides the greatest amount of ground clearance, in conjunction with provision for retaining grease or oil and excluding dirt.

26. Either two-wheel drive or four-wheel drive may be employed.

27. *Fenders.*—Truck will be provided with front fenders only, which must be of suitable design and rigid construction.

28. *Seat and top.*—Seat shall be of proper width for not less than three persons and shall be provided with removable cushion and stationary back rest, upholstered with best quality imitation or genuine leather. Top to be of collapsible type, with extra heavy bows and fastening irons, and covered with best quality 12-ounce water-proofed canvas.

29. *Bumper.*—A steel bumper consisting of curved channel or other suitable section, shall be properly bolted to frame of truck and so placed as not to interfere with the starting crank. Front towing hooks may be secured to this bumper if so desired, and satisfactory attachment is made. No part of the bumper extending in front of the radiator or hood of engine shall be integral with the chassis frame.

30. *Radiator protector.*—Each truck shall be provided with an effective radiator protector, which shall extend the full height and depth of the radiator. This radiator protector shall be constructed of heavy structural steel shapes or steel castings, and shall be firmly bolted to the chassis frame. It must be so installed as to not interfere with the starting crank. Complete detail drawings showing the construction of this protector must be submitted.

31. *Ground clearance.*—The ground clearance at all parts of truck, except at drive sprockets and hub brake drums, shall be not less than 11 inches.

32. *Turning circle.*—The truck shall be so designed as to turn in a circle of not more than 55 feet, measured from outside wheel tracks.

33. *Gauge*.—It is desirable that the gauge of front and rear wheels shall be 61½ inches measured from center to center of felloe bands in order that the trucks may track with three-ton trucks of the same gauge.

34. *Wheel base*.—The wheel base must be suitable for the use of a 10-foot body, and shall be not less than 124 inches or more than 150 inches.

35. *Engine*.—The engine must be of the four-cycle type, water cooled, having not less than four cylinders, and provided with poppet valves. It shall have a total piston displacement of not less than 275 cubic inches, but a larger engine is desirable. It must be under a removable hood forward of the driver. All bearings shall be so designed as to be easily adjusted to take up wear, and all piston pins, valve stems, and push rods, shall be properly brushed. If the crank case is of the split type, the lower half of case must be removable without disturbing bearings.

36. *Suspension*.—The engine must be mounted with a three-point suspension, or on a subframe having a suitable three-point suspension, which will effectively prevent the distortion of frame from straining any part of engine or transmission. The single flexible pin connection shall be hardened and ground, and provided with a phosphor-bronze bushing, or a hardened and ground steel bushing.

37. *Tractive effort*.—The vehicle shall have sufficient power to carry its gross load on high gear up a 4 per cent grade, and on low gear up a 25 per cent grade, both grades being on a hard road surface. It shall also be able to stop and start with its gross load on the 25 per cent grade.

38. *Governor*.—A centrifugal type motor speed limiting governor of approved make shall be provided and adjusted so as to prevent the truck from exceeding a speed of 14 miles per hour on high gear. The governor shall be adjustable and must have provision for sealing with ordinary lead seals after adjustment.

39. *Crank case*.—The crank case may be of the barrel type or divided in a horizontal plane, with all bearings in the upper section. It must be so designed as to be light in weight and also of proper strength, and must be provided with suitable ribbing in order to secure a strong case free from distortion or weakness and without excessive weight. It must also be so designed as to permit any piston to be removed from its cylinder and taken out of the case without removing the cylinder or crank shaft.

40. All oiling receptacles, pipes, and oil guides, except the constant level troughs for connecting rods, shall be either pressed or cast integral with the crank case, or the oil pipes may consist of external leads. If external leads are used, they shall be short and rigid or properly clipped to prevent vibration and chafing.

41. The crank case must be a smooth casting free from defects of material, design, or construction.

42. All joints or connections in crank case shall be made thoroughly oil tight.

43. The bearings for crank shaft shall be in the upper section if the case is made in two sections. The bearings shall consist of heavy split bronze bushings, and at least one set of these bushings shall be provided with side flanges to take end thrust. These bushings shall be faced with a suitable thickness of best quality bearing metal, and provided with proper oil grooves, or properly designed ball or roller bearings shall be provided. The bearing caps shall be of proper design, and made of material suitable for the purpose. These caps shall be held in place by means of alloy steel bolts of proper size provided with castellated nuts, with suitable cotter pins. Not less than three main bearings shall be provided in a four-cylinder engine.

44. The main crank shaft bearings and the connecting rod bearings shall be finished to an accurate bearing surface, unless the bearings are of the ball or roller type.

45. *Oil capacity*.—The oil reservoir of engine must be so designed as to hold sufficient lubricating oil to permit the truck to run fully loaded a distance of not less than 200 miles over ordinary solid roads without replenishing the supply of oil.

46. The oil filler tube on crank case shall be provided with a nonremovable, fine mesh, brass screen, and also another screen of same construction which is removable.

47. *Crank shaft*.—The crank shaft shall be forged from a single piece of chromium nickel, or 30–40 carbon steel of suitable quality for the purpose, and heat treated to develop the proper physical properties, and shall have not less than three main bearings for a four-cylinder engine.

48. The crank shaft shall be sufficiently large in section at all points to prevent objectionable torsional or lateral vibration at all practicable engine speeds and loads.

49. Both crank bearings and main bearings shall be large in area, in order to give low bearing pressures and long bearing life without replacement or adjustment.

50. The crank pins and main bearings of crank shaft must be ground to a high finish.

51. The crank shaft must be accurately balanced for static balance.

52. Suitable means must be provided for preventing cylinder oil from creeping out of the crank case at the end of bearings.

53. The flywheel flange must be forged integral with the crank shaft. This flange must be large in diameter and so designed as to insure an accurate centering of the flywheel on the flange. The bolts used in fastening the flywheel to crank shaft shall be of suitable diameter and material and properly heat treated. If the bolts take the driving strain, they shall be of large diameter and tightly fitted in reamed holes in both members.

54. *Cylinder.*—The cylinders shall be cast from best quality gray iron and must be free from sand holes, blow holes, cold shuts, or other imperfections. The bore of finished cylinders must be exactly circular and the same diameter from end to end, with limits of plus or minus 0.0005 inch.

55. The water jackets of cylinders must be tested under a hydrostatic pressure of 100 pounds per square inch, which test they must withstand without leaking.

56. The cylinders must be rigidly bolted to the crank case by means of a proper number of stud bolts in crank case, and double nuts, or single long type of tight fitting nuts. The stud bolts must accurately fit the holes in cylinder casting, and prevent the cylinders from getting out of alignment.

57. The water passages in jackets shall be of large area and volume, must extend entirely round the valve seats, and must offer as little obstruction as practicable to the flow of water. The water passages shall be so designed as to secure a uniform flow of water through all parts of the jacket. The water must circulate freely between the cylinders and the jackets must be free from air pockets or dead ends where the water is unable to circulate freely. The jacket space must be so designed that all water will drain completely from the jackets when the lower drain cock on radiator or water circulating system is opened.

58. The compression space in each cylinder must be accurately calibrated, and the cylinders selected so that the clearance volume of each cylinder is the same as that of any other for the same engine within $\frac{1}{2}$ cubic centimeter.

59. *Pistons.*—The pistons shall be designed and constructed in accordance with the best standard practice. They shall be light in weight, heavily ribbed to secure proper strength, and made of best quality gray cast iron, free from blowholes, sand holes, shifted cores, or other imperfections. They shall be properly annealed, machined with light cuts to avoid distortion, and ground to a high finish, proper tolerance and a suitable clearance in cylinders.

60. If the pistons are made of cast iron, the clearance between maximum diameter of piston and the diameter of cylinder bore shall not be less than 0.002 inch or more than 0.004 inch. They shall be properly tapered or relieved at the head end to provide for expansion, and shall have an internal stiffening flange at the open end.

61. The pistons shall be of such length as to give a low bearing pressure on the cylinder walls. The piston must also be so designed and constructed as to avoid slapping at all engine speeds and loads.

62. The pistons complete with rings and piston pins must be selected for weight, so that each piston will be the same in weight as that of any other piston for the same engine.

63. *Piston pins.*—The piston pins shall be hollow, with a wall of proper thickness. They shall be made of steel of suitable quality for the purpose, properly case hardened, and ground to a high finish and proper tolerance.

64. *Piston ring and grooves.*—The piston shall be provided with at least three ring grooves of proper width and depth, all located between the wrist pin and the head end of piston. These grooves shall be ground to a high finish at the sides. An oil groove shall also be provided which will carry oil to each end of the piston pin and furnish lubrication for same.

65. If the triple type of ring is used, having one internal ring and two external rings, two ring grooves may be used, each provided with a triple ring, or one groove may be provided with a triple ring and the other with the ordinary type of single ring.

66. The single rings shall be ground to a high finish and proper tolerance on the outside periphery and on the sides. The outside rings of triple rings must be ground all over, and the inside ring of triple ring must be ground on the outside and on the sides.

67. The rings must be of proper tension and installed with only sufficient opening between the ends as to provide for expansion of the rings under maximum temperature conditions.

68. Suitable means must be provided for preventing an excess of oil from working past the piston rings and into the combustion space, and at the same time securing proper lubrication of the piston and all bearings connected with the crank case.

69. *Connecting rods.*—The connecting rods shall be of I-beam section, drop forged from best quality steel, equal to 30–40 carbon, and properly heat treated.

70. The crank end of the connecting rods shall be provided with bronze bushings faced with a proper thickness of best quality bearing metal.

71. These bearings shall be scraped to a proper fit with the crank and shall be held in place with suitable dowel pins. The bearing metal shall be provided with proper grooves and oil holes for lubrication.

72. If the bearing on piston pin is in the connecting-rod end, a suitable solid phosphor-bronze bushing, pressed in, shall be used in connecting-rod end.

73. The bearing at each end of connecting-rod shall be large enough to withstand long periods of severe service without the necessity of replacement or adjustment.

74. The cap end of connecting rod shall be made of the same material as the connecting rod and shall be held to the rod and bearings by means of suitable bolts made of best quality $3\frac{1}{2}$ per cent nickel steel or equal, properly heat treated, provided with suitable castellated nuts and cotter pins. The connecting-rod cap shall be provided with a suitable scoop for picking up oil from the constant level oil receptacles and delivering same to the bearings, or shall be provided with suitable force-feed lubrication.

75. The complete connecting rods for each engine must be selected for weight so that each connecting rod shall be approximately of the same weight as that of any other connecting rod for the same engine. These connecting rods must have also their centers of gravity at approximately the same point on each rod.

76. *Valves.*—Both intake and exhaust valves must have ample lift, must be large in diameter in proportion to cylinder volume in order to insure complete filling of the cylinders when running at the maximum governed speed of engine.

77. The exhaust valves must be constructed of best quality 13 to 16 per cent tungsten steel.

78. The complete composition of the steel must be stated definitely and all valves must be heat treated to develop the proper physical properties.

79. The intake valves must be made of best quality 3.5 per cent nickel-steel or equal. If the intake valves and exhaust valves are interchangeable in size, then the intake must be made of the same material above specified for exhaust valves.

80. All valves must be properly machined and the stem and face of valves ground to a proper finish and tolerance.

81. The valves must be ground to a thoroughly gas-tight fit in the valve seat.

82. The valves must be constructed of one piece for both stem and head, must have a large radius fillet between the stem and head, and must be provided with 30 to 45 degree seats.

83. All parts of valve mechanism must be completely inclosed in order to prevent the entrance of dust or dirt. If the engine is of the L-head type, or T-head type, the valve springs, stems, and tappets must be inclosed by a suitable readily removable cover plate, and if the engine is of the valve-in-head type, the overhead valve mechanism must be completely inclosed with a suitable readily removable cover, or the bearings for rocker arms must be provided with suitable felt washers to prevent the entrance of dust or dirt.

84. *Valve springs.*—The springs for both intake and exhaust valves shall be made of best quality steel, of proper strength for the maximum speed of the engine, and designed so as to withstand a long period of service without sagging or breaking. These springs shall be heat treated to develop the proper physical properties.

85. *Valve lifters.*—The valve lifter must be made of the most suitable steel and of proper design, with properly hardened wearing surfaces. It must have a suitable adjustment for height, which is easily accessible, and which will retain the adjustment and not shake loose due to vibration. This adjusting device must be strong enough to withstand heavy strains with a wrench in adjusting without distorting or stripping of threads.

86. *Valve lifter guide.*—The engine shall be provided with suitable valve-lifter guides of proper material, which will be readily removable. These guides shall be installed in a proper relation to the valve stem and cam shaft, and so installed that they will not shake loose. They must be long in proportion to the diameter of the valve lifters, must be finished in the bore to a smooth cylindrical bearing surface, and must have a proper clearance in relation to the diameter of valve lifter, in order to insure easy working, perfect lubrication, and quiet operation.

87. *Valve-stem guides.*—The engine shall also be provided with suitable pressed-in cast-iron valve stem guides. These guides shall be made of best quality gray cast iron, free from sand holes or blow holes, and reamed to a proper tolerance and clearance in reference to the diameter of valve stem. The length of guide shall be as long as practicable in order to insure long life, quiet operation, and a proper alignment of the valve.

88. *Cam shaft.*—The cam shaft shall be constructed of carbon steel, of best quality for the purpose, and the cams properly casehardened, and both the cams and bearings ground to a proper finish and size.

89. The cams must be forged integral with the cam shaft, and the bearings shall be such size as to permit the shaft to be removed without removing the bearings or the bearings must be readily removable with the cam shaft. The gear connection for cam gear shall be a flange, which is forged integral with the cam shaft and provided with a central boss for centering the cam gear.

90. The cams shall be designed and ground to such shape as to secure quiet operation of the engine and maximum torque and shall have wide bearing faces in order to prevent undue wear of the cams or valve lifters.

91. *Cam-shaft bearings.*—The cam shaft shall be provided with not less than three bearings for a four-cylinder engine. The cam-shaft bearings shall be of the best quality phosphor bronze or equal bearing metal. They shall be provided with an effective means for securing a proper circulation of oil through the bearings from the crank case splash system, or by a pressure oiling system.

92. *Gears.*—The cam-shaft gear may be of cast iron but the smaller gears on crank shaft and on magneto, generator, and pump shaft must be of steel. These gears must be machine cut, and all gears accurately adjusted and ground to a quiet running fit under load. They must also have a sufficient width to insure long wearing life.

93. *Carburetor.*—The carburetor must be of such design and provided with such heating devices as will enable it to utilize gasoline having a specific gravity of 58 Baumé, or 0.7446 specific gravity at 60° F., and permit the engine to operate with satisfactory economy and regularity at all speeds and loads.

94. The carburetor must be adjustable and provided with means for readily enriching the mixture when starting in cold weather. A suitable drain cock must be provided at the bottom of the float chamber. The intake manifold must be provided with a suitable water jacket, and the carburetor must be installed in as high a position as practicable.

95. A suitable accelerator pedal must be provided, and also a hand throttle on steering wheel.

96. *Cooling system.*—The cooling water must be pump-circulated and the system shall be so designed that it may be completely drained to prevent freezing. Thermosiphon systems will not be acceptable.

97. The radiator must be of such design as to insure a uniform and free circulation of water, and mounted to withstand severe vibration or twisting without injury. It must be also readily repairable without special equipment.

98. All parts of radiator in contact with water shall be thoroughly tinned. Suitable baffle plates shall be provided in order to insure a uniform circulation of water through the entire radiator.

99. Ample area for the circulation of air through the radiator shall be provided and also proper outlet area shall be provided to permit the free passage of the heated air away from the rear of engine. Suitable louvres shall also be provided in each side of engine hood.

100. The radiator shall have a frontal area of not less than 1.3 square inches per cubic inch of piston displacement, and a total radiating surface in radiator of not less than 40 square inches per cubic inch of piston displacement.

101. *Fan.*—The engine shall be provided with a suitable fan which will cause a rapid circulation of air through all parts of the radiator, and insure proper cooling of the circulating water. This fan must be provided with suitable means for the ready adjustment of fan belt. The fan pulley and fan belt driving pulley must be so arranged as to permit of the ready replacement or removal of the belt. The fan belt and fan pulley must be constructed in accordance with S. A. E. standards.

102. *Spark plugs.*—The spark plugs shall be constructed in accordance with the latest recommendations of the Society of Automobile Engineers, and the large Hexagon type of shell provided with a single sparking point shall be used.

103. The plug must be provided with a porcelain of best make, packed with suitable copper gaskets and held in place with proper bushings and flexible cone.

104. The center electrode shall be made of a metal which will not readily corrode, warp, or be burned by the hot gases, and must be packed thoroughly gas-tight inside of the porcelain.

105. The ends of the high tension cable at spark plugs must be provided with suitable terminals properly secured to the cable and spark plug terminals.

106. The seat for spark plug gaskets shall be finished to a smooth and plain surface, and the seat shall be at right angles to the center line of spark plug.

107. *Lubricating system.*—The engine shall be lubricated by a constant level splash system or pressure system, or a combination of the two methods. The troughs for

splash lubrication shall be higher at the rear than at the front in order to give a greater depth of oil when ascending grades.

108. The oil pump must be provided with suitable screens, which are readily removable for cleaning, and which will prevent any solid foreign matter from passing through the screens. It is desirable that the oil pump and screens be so arranged as to make the screens self-cleaning by an intermittent reverse flow of oil.

109. *Muffler*.—The muffler must be of substantial construction, and so designed as to give the minimum back pressure and effectively muffle the exhaust. It must be so constructed and installed as to be readily taken apart for cleaning. The final exhaust not to be directed downward.

110. It is desired that the magneto, generator, coil, timer, battery, and muffler be kept as high as practicable.

111. *Starting motor*.—Suitable provision must be made either on the engine or elsewhere, for the installation of a starting motor, of proper size and design. The starting motor is not to be furnished, but the truck must be so arranged as to readily permit of its installation at any time if so desired.

112. *Electric lighting and ignition*.—The truck must also be provided with a suitable electric lighting system and dual ignition system. The electric lighting system shall consist of a generator driven from the power plant, a reverse current voltage cut-out, a 120-ampere hour, 6 volt, lead acid, or nickel-steel alkali battery, electric lights, fuses, wiring, and other necessary details. The ignition system shall consist of a high-tension magneto of best make and a battery and coil ignition system. One distributor and one set of spark plugs may be used in common with the two separate ignition systems. The current for battery ignition will be taken from the electric lighting battery. Both battery ignition and magneto must be readily controllable from the driver's seat, and the spark advance lever on steering wheel must control both ignition systems, and give a suitable degree of spark advance for all positions of the spark advance lever. The range of spark advance shall not be less than 30 degrees of crank angularity. The full retard position of the spark lever shall retard the battery spark at least 3 degrees after top center.

113. If the high tension magneto or generator is coupled to a drive shaft, two universal joints or a flexible coupling must be used in the driving connection, in order to prevent binding of bearings. The flexible coupling, if used, must provide for parallel and angular displacement.

114. *Generator*.—The generator shall be of the fully inclosed direct current, shunt, or compound-wound type, and must have a continuous capacity of 12 amperes. The voltage of the generator at all speeds above that at which cut-out closes, shall be suitable for charging a six-volt storage battery, and for supplying current to 6-8 volt tungsten lamps. It must be driven from the engine by means of suitable gears or silent chain drive. The gears or silent chain drive must be completely inclosed, thoroughly lubricated, and effectively protected from dust and dirt. If driven by means of silent chain drive, the chain must be readily adjustable. Definite data in reference to the material and construction of chain or gears must be given.

115. *Armature*.—The armature shall be of the laminated drum type, with the windings thoroughly insulated, and so installed in the slots as to effectively resist the action of centrifugal force at the maximum guaranteed speed of armature. After the coils are properly secured in the slots and the armature coil terminals are securely soldered into slots in the ends of commutator segments, the entire armature shall be treated with an insulating compound by a suitable impregnating process. The insulating compound shall have suitable insulating qualities, and shall not soften under a continuous temperature of 250° F. The armature shall also be of proper electrical magnetic and mechanical balance.

116. Suitable means must be provided for preventing oil from the bearings from collecting on the commutator or armature.

117. *Frame*.—The generator shall be constructed with a suitable frame having high magnetic permeability, and fitted with proper end frames.

118. Suitable bearings of best quality shall be fitted in each of the end frames. The bearings shall have proper means for ready lubrication, shall be a proper fit on the armature shaft, and shall not be so loose as to cause vibration of the armature at any practicable engine speed. The ratio of engine to generator speed must be given and also the maximum permissible speed of the generator. The generator must be run at a constant ratio of engine speed, and no friction drives or constant speed devices will be permitted. The speed of generator in any case must not be more than twice the engine speed. The generator drive connection must be made direct with the engine, or with some part of drive connection between the engine and clutch.

119. The brushes of generator must be the self-lubricating type, having a spring take up which will give a proper tension on the brush during its entire wearing life.

The brushes must be easily accessible and readily removed or replaced without removing or loosening other parts, and must have ample area of cross-section and area of contact to prevent excessive heating under continuous maximum permissible load. The brushes must be practically sparkless at all speeds, and at all loads from no load to maximum permissible load.

120. *Commutator*.—The commutator must be constructed of best quality hard forged copper of uniform density, and the segments properly insulated with sheet mica of suitable thickness and proper density to wear equally with the copper segments.

121. *Regulation*.—All voltage and current regulating devices must be contained in assembly with the generator. No separately mounted controlling devices will be permitted. The use of sliding contact devices for current or voltage regulation, and the use of permanent magnets in the construction of generator is also prohibited.

122. The generator shall be so constructed as to give a proper voltage and current when connected with the storage battery, at all speeds and current values up to maximum rated output, without moving controlling devices of any kind. The current and voltage shall be kept at proper values by the inherent regulation of the generator.

123. *Alternate*.—An alternate proposal is desired giving the amount either more or less than proposed price, for furnishing a generator the same as above specified; except that it shall be provided with an automatic voltage regulating device of the vibratory type having either platinum or silver contact points, and which will keep the voltage of generator practically the same at all loads and speeds above "cut-in" speed, without the necessity of connecting the generator to storage battery. The voltage regulator must be included in the generator assembly, and not mounted separately.

124. *Rate of charge*.—The current output of generator must not be greater than the maximum advisable rate of charge of the storage battery, at the normal engine speeds irrespective of the condition of battery charge.

125. *Charging speed*.—The generator shall begin to charge the battery at an engine speed of not more than 500 revolutions per minute and at the same time furnish the current necessary for ignition.

126. *Data regarding generator*.—The following data must be submitted in reference to the generator it is proposed to furnish:

(a) The voltage and speed of the generator when the cut-out opens, cutting off the current from generator to battery.

(b) The speed and voltage of generator when the cut-out closes permitting the current from generator to pass to battery.

(c) The weight of generator without gear or sprocket.

(d) The ratio of speed between engine and generator.

(e) The speed voltage curve, or tabulated data, and speed-current curve, or tabulated data, of generator when connected to battery.

(f) The speed voltage curve, or tabulated data, of generator when provided with a voltage regulator.

(g) The maximum allowable current output of generator, and the temperature guarantees at maximum output for stated periods.

(h) The power required to drive the generator at maximum rated power output and at a speed corresponding with an engine piston speed of 1,000 feet per minute.

127. *Waterproof covers*.—The high-tension magneto shall be provided with a suitable waterproof cover of proper construction and arranged so as to be securely fastened around magneto and readily removable.

128. *High tension magneto*.—A high tension magneto of best make must be installed on the engine and positively driven either by gears or by a silent chain drive. If driven by gears, the gears must run in oil, and if driven by silent chain drive, the chain must be readily adjustable. In either case the chain or gears must be completely inclosed, thoroughly lubricated, and effectively protected from dust, water, and dirt.

129. One distributor may be used in common for both battery ignition and for the magneto. The distributor must be of the weatherproof type and provided with a suitable safety gap.

130. The breaker points must be of platinum, and the breaker box and contacts must be easily accessible and readily adjustable. The breaker box must completely inclose the breaker mechanism and prevent the entrance of dust, water, or dirt.

131. The magneto must be provided with a suitable spark advance arrangement, which will enable the magneto to deliver an adequate strength of spark at all positions of the spark advance lever. The definite range of spark advance must be given in the proposal and must not be less than 35° of crank angularity.

132. The sector for spark advance lever must be plainly marked "start" and "run" for the most suitable starting and running positions.

133. With battery ignition, the strength of spark must be adequate for all engine speeds, and the spark lag must be as small as practicable. The definite amount of spark lag in degrees of crank angularity must be given for all engine speeds, with a fixed setting of the spark advance lever.

134. Complete details of the construction of the magneto, with drawings and illustrations, must be submitted with proposal.

135. The guaranty length of spark between needle points must be given with engine running at 100 revolutions per minute, and for both battery-ignition and high-tension magneto the lag of spark in degrees of crank angularity must be given for all practicable engine speeds.

136. *Fabric insulated primary cable.*—All primary cable shall be single flexible copper conductors, fabric insulated. This cable shall be constructed in accordance with the following table:

No.	Number of wires.	Diameter of wires.	Nominal size of wires.	Circular mils in cable.	Carrying capacity.	Diameter over wire.	Diameter over braid.	Layers of cambric.
					<i>Amperes.</i>			
14.....	41	0.0100	30	4,100	.....	0.080	0.20	2
12.....	49	.0113	29	6,208	.....	.102	.23	2
10.....	49	.0142	27	9,854	.....	.128	.25	2
2.....	133	.0226	23	67,764	127	.340	.478	3
1.....	133	.0254	22	85,466	152	.380	.518	3
0.....	133	.0285	21	107,743	202	.427	.578	3
00.....	133	.0320	20	135,926	227	.480	.628	3

All dimensions in inches.

137. *Stranding.*—No. 14 to be bunched; Nos. 12 and 10 to be bunched or rope lay; Nos. 2, 1, 0, 00 to be rope lay.

138. The tinned and stranded copper conductors shall first be covered with a layer of closely wrapped cotton, varnished, the two or three layers of varnished cambric applied, and the whole covered with a heavy, closely woven cotton braid. The braid will then be saturated with an oil and moisture-proof varnish.

139. The completed cable shall be capable of withstanding for one minute a potential of 1,500 volts A. C., applied between the copper conductors and a metal foil wrapped around the outside of the cable. The frequency of the test current shall be in accordance with the standardization rules of the A. I. E. E.

140. *High-tension cable.*—All high-tension cable connecting with spark plugs, distributors, high tension magneto, or the secondary coils, shall be made up of either 26 or 37 copper conductors, thoroughly tinned, and 0.010 inch in diameter, and covered with three layers of rubber compound having a total thickness of not less than 0.100 or 0.125 inch. The cable shall be covered with two layers of heavy, closely woven glazed cotton braid, and the braid treated with two coats of an oil and waterproof varnish.

141. Both the primary and secondary cable shall be constructed and tested in accordance with the latest recommendations of the Society of Automobile Engineers.

142. *Tinning test.*—All copper wire must withstand the following tinning test: Samples will be properly selected to secure an average grade of tinning. The samples will have the insulation carefully removed, and the wires of the cable carefully separated and straightened. The wires will then be thoroughly cleaned by means of ether, benzine, gasoline, naphtha, caustic alkali solution, or hot water and soap, which ever may be found necessary to thoroughly clean the wires.

143. The wires shall then be rinsed in clear water and wiped dry with a soft cotton cloth. The wires will then be immersed for one minute in a solution of hydrochloric acid having a specific gravity of 1.038 at 70° F. and then rinsed in clear water and wiped dry as above specified. The wires shall then be immersed for 30 seconds in a solution of sodium polysulphide having an excess of sulphur, then rinsed in clear water and wiped dry.

144. The complete cycle of operations shall then be repeated, commencing with the immersion in hydrochloric acid and ending with the immersion in the sodium polysulphide solution.

145. Tests of tinning will be made on not less than 10 sets of samples of reasonable length. All wires must withstand one immersion in the hydrochloric acid without blackening in the sodium polysulphide solution, and 75 per cent of the wires must withstand three immersions in the hydrochloric acid without blackening in the

sodium polysulphide solution. All tests shall be conducted with the solutions at a temperature of 70° F.

146. *Electric lighting equipment.*—The truck shall be provided with the following electric lighting equipment:

One searchlight, with quick acting vertical and horizontal adjustment, silver plated brass or copper parabolic reflector, with 21-candlepower tungsten focusing lamp.

One instrument lamp, with 2 candlepower bulb, and one tail lamp with 2 candlepower bulb, connected in series.

One portable trouble lamp, 8-candlepower, with cord, and plug with separate socket.

One ammeter of best make, for indicating the charge and discharge of battery.

147. *Searchlight.*—The searchlight shall be not less than 10½ inches in diameter outside of front flange. The body of lamp shall be spun or pressed from one piece of heavy metal. In the design of the lamp, no parts shall be used which are liable to shake loose from vibration. The reflector shall be parabolic in form, spun or pressed from brass or copper of suitable thickness and heavily plated.

148. The searchlight shall be provided with a suitable handle and means for clamping the searchlight securely in any desired position. The searchlight shall be installed on the chassis in a location permitting it to be readily operated from the driver's seat, and also in such a position as to be unobstructed from the front.

149. This lamp shall be provided with a single point bayonet socket with two wire connections, and a suitable focusing device.

150. *Side lamps.*—The two side lamps shall be best quality combination oil and electric, of suitable design and construction, and fitted with standard S. A. E. single point, grounded return socket, and 15-candlepower 6-8-volt tungsten bulbs. The oil fonts shall be so designed that they can not rattle or drop out. These lamps shall be made of heavy gauge sheet steel or brass, thoroughly riveted and soldered, fully black enameled, and fitted with flat forged steel brackets or installed in dash. They shall have large glass semaphore front lens, and a side lens of green glass. The flat bracket shall be a snug fit in the lamp receptacle for same, and shall be held to lamp by means of a suitable bolt passing through lamp, receptacle, and bracket.

151. *Tail lamp.*—The tail lamp shall be the same as specified for side lamps, except that the large semaphore lens shall be of red glass colored in the glass composition, the side lens shall be of clear glass, and the bulb shall be 2 candlepower, 4-volt, connected in series with bulb of the same size and rating in instrument lamp. The tail lamp bracket shall be made of forged steel.

152. *Trouble lamp.*—The portable trouble lamp shall consist of a suitable hardwood handle through which the cord shall pass, and provided with an S. A. E. standard, single-contact socket, with two connections for wires, a lamp guard of proper design, and an 8-candlepower, 6-8 volt tungsten bulb. The other end of cord shall be provided with a suitable single-point combination plug for connection with a ground return socket. The cord shall be No. 14 B. & S. gauge, flexible, twin-conductor, rubber covered, double braided, packing house cord of best make. The portable trouble lamp shall be provided with an S. A. E. standard, single-point, flush type, flanged socket, installed in a readily accessible location, preferably on the dash, and connected with the lighting switch.

153. *Ammeter.*—Furnish and install in a suitable location a flush type ammeter of best make, having a double scale for indicating the charge and discharge current of battery. It shall be installed in such a location as will permit the same to be readily observed from the driver's seat, and properly illuminated by the instrument light.

154. This ammeter shall be connected in the circuit leading from the negative terminal of battery. The ammeter must be so designed as to not be affected by severe vibration. It must have a light moving system and be dead beat in action. It must be thoroughly insulated, and so designed as to avoid short circuits due to the loosening of parts.

155. *Extra lamp bulbs.*—The following extra lamp bulbs shall be provided, installed in a suitable metal case:

Two 15-candlepower, 6-8 volt tungsten bulbs of best make, with single-point Edison bases.

Two 8-candlepower, 6-8 volt tungsten bulbs of best make, with single-point Edison bases.

Two 2-candlepower, 4-volt tungsten bulbs of best make, with single-point Edison bases, and matched for series burning

156. The bulb base shall be of heavy seamless steel, with a heavy seamless steel hinged cover with automatic spring catch. The bulbs shall be held securely in place by means of brass springs and a suitable locking device. The case must be of proper

size to hold the above lamps without the lamps touching each other or the sides, top, or bottom of the case. The case shall be thoroughly coated both inside and outside with best quality black enamel.

157. *Wiring*.—The truck shall be wired with the system of installation known as the ground-return system. In this system of wiring the chassis frame or bare metal is used as the return circuit.

158. *Conduit*.—Wherever practicable the wires shall be carried in either rigid or flexible metallic conduit. The flexible conduit is preferred. The conduit shall be securely fastened by means of galvanized straps and galvanized machine screws of proper size. The ends of the conduit must point downward so that the water will not run into the conduit.

159. *Cleats*.—Where wires are not protected with conduit they shall be securely cleated at intervals of not more than 10 inches. Such cleats shall be of galvanized steel of proper thickness and width and secured with suitable screws. Brass machine screws in tapped holes shall be used in all cases where the fastening is to be made on metal.

160. *Clearance*.—When conduit is omitted, no wire shall be nearer to the exhaust pipe than 2 inches.

161. Where conduit is used the minimum clearance between the exhaust pipe and the conduit shall be 1½ inches.

162. A minimum clearance of ¼ inch shall be securely maintained between conduit and the nearest carburetor, gasoline pipe, gasoline tank, moving rod, or moving lever.

163. *Grounding*.—Wherever an insulated conductor is connected to "ground," the connection shall be installed so as to be readily accessible and removable on the completed truck. In all cases where the connection is made to an iron or steel part, the iron or steel shall be thoroughly tinned at the point where the connection is made, and the ground connection shall be firmly maintained by means of screws or bolts with suitable lock washers. Brass or copper lugs of proper size shall be used for all ground connections. The lugs shall be properly soldered to the ends of cables.

164. All cables shall be continuous from connection. The splicing of cables will not be permitted. All cables shall be provided with suitable lugs or terminals wherever practicable. Where the use of terminals is not practicable, the ends of cables shall be tightly twisted, formed into a solid loop, or proper size for the screw connection, and the loop thoroughly soldered.

165. *Extra fuses*.—Two complete sets of extra fuses shall be furnished with each truck.

166. Apparatus intentionally "grounded" in itself shall be so made that for inspection or test the ground can be opened without dismantling the apparatus.

167. *Connectors*.—All connectors shall be so made that when disconnected the section which is alive will have all live parts recessed one-sixteenth or more below the end of the shell connector.

168. *Protection against accidental short circuits*.—All connecting posts on fuse and junction blocks, or on instruments, generators, or switches, which must necessarily have exposed live parts, shall be so constructed, recessed, or installed that an accidental short circuit can not be effected with screw drivers, pliers, wrenches, or other tools used while making minor repairs or adjustments.

169. Where live parts might be liable to accidental short circuits to adjacent metal, they must be provided with suitable insulating caps or bushings, or surrounded with a suitable insulating barrier; or the adjacent bare metal liable to be accidentally connected to them through repair tools should be covered with insulating material.

Protective devices.—The current to all circuits shall be passed through protective devices.

171. Protective devices shall be made on the battery side of switches and junction boxes.

172. Fuses must be of the inclosed type, constructed so that inspection will show whether or not they have been melted.

173. Fuses must be marked with their rating.

174. Standard 10-ampere fuses shall be 1½ inches long over all, with ferrules ¼ inch in diameter.

175. Fuses must be so constructed that with the surrounding atmosphere at a temperature of 75° F. (24° C.) they will carry indefinitely a current 10 per cent greater than that at which they are rated, and at a current 25 per cent greater than the rating open the circuit without reaching a temperature which will injure the fuse tube or terminals of the fuse block. With a current 50 per cent greater than the rating and at room temperature of 75° F. (24° C.) the fuses starting cold must blow within one minute.

176. The temperature of the exterior of the fuse inclosure must not rise more than 125° F. (70° C.) above that of the surrounding air when the fuse is carrying the current for which it is rated.

177. Fuse clips must be so made that fuses can not slip out accidentally. They must be fastened to a base so that they can not turn.

178. Clips should be so designed and protected that they can not be sprung together enough to take a permanent set interfering with the insertion of the fuse, or so that they can be sprung apart far enough to give them a permanent set sufficient to prevent their holding the fuse tightly.

179. *Bulb sockets.*—Bulb sockets must be so made that the continuity of the return path for current is not impaired when the lamp is subjected to vibration.

180. In lamps hinges, shall not be relied on to carry current between the bulb socket and the battery. The connections must be either permanent or so spring held that contact is maintained tight under vibration.

181. Bulb sockets and connector plugs shall be constructed in accordance with the latest recommendations of the Society of Automobile Engineers.

182. The instrument light socket shall be the single-point type with two terminals for wires. One terminal will connect with source of current supply, and the other will connect with a wire leading to the one-point grounded tail-light socket, thus putting the instrument light and tail light in series.

183. *Fuse box.*—A four-circuit fuse box of proper design shall be installed in a readily accessible location, and provided with fuse clips and fuses as follows:

184. One 30-ampere fuse for main connection between battery and junction fuse block. This fuse shall be the standard National Electric Code 30-ampere, 250-volt, indicating fuse, 1½ inches long and ½ inch in diameter. One fuse clip from this fuse shall connect with the wire leading from negative terminal of storage battery, and the other fuse clip shall connect with one end of each of the other three fuses.

185. Three 10-ampere fuses for lighting and ignition circuits. These fuses and fuse clips for same shall be constructed as specified in paragraphs 172–178 inclusive, and paragraph 184. One of these fuses will connect with lighting switch, one with search-light switch, and the other with ignition switch.

186. The fuse box shall be of best make, and constructed of molded insulating material in both box and cover, or the box and cover may be of black enameled steel suitably lined with a proper insulating material. The wires shall all enter the fuse box from below and be a snug fit in the opening in box. If steel boxes are used, the holes in box where wires enter shall have suitable insulating bushings, and the fuse clips must be mounted on a heavy hardwood base, securely fastened to back of box by suitable brass screws. The heads of screws shall be deeply countersunk below the surface of the base.

187. *Extra fuses.*—One complete set of extra fuses will be provided and attached by means of suitable spring clips to the inside of fuse-box cover.

188. *Fuse clips.*—The fuse clips for all fuses shall be constructed as required by paragraphs 177 and 178 of these specifications.

189. *Switches.*—The ignition switch shall be triple-point switch of best make, with one point for battery ignition, one point for magneto ignition, and the other point for cutting out the high-tension magneto by grounding the high-tension coil.

190. The two lighting switches shall be the push type, of flash switch of best make, and mounted in a location readily reached from the driver's seat, and provided with a heavy brass two-gang switch plate in dead black finish.

191. *Insulation requirements of electrical apparatus and wiring after installation on truck.*—All electrical apparatus and wiring on truck shall be capable after installation of withstanding for one minute an alternating potential of 500 volts, the test being applied between the conducting circuit and frame or "ground." In making the test the ground connection shall be removed at such points as will permit the test being applied to all parts of the circuit which, in actual use, will be subjected to the working potential.

192. *Exception.*—Batteries will not be subjected to any insulation test above their working potential.

193. *Temperature test of insulating materials of electrical apparatus.*—All insulating material used in connection with plugs, sockets, and similar devices of electrical apparatus shall be capable of withstanding for 30 minutes a temperature of 300° F.

194. *Battery.*—Furnish and install on the truck a 6-volt 120-ampere hour battery of best make, designed for lighting and ignition purposes only. This battery shall have a rated capacity of 120 ampere-hours, based on the method of rating given below, and may be either the lead-acid type or the Edison alkali-nickel-steel type.

195. The proposal must state the guaranteed life of the battery when properly cared for in accordance with the S. A. E. standard instructions.

196. Complete information regarding the details of the construction of the battery must be given, together with the guaranteed efficiency; that is, the ratio of watts output to watts input must be given, based on charging the battery to a potential of 2.6 volts per cell and discharging to a potential of 1.8 volts per cell at a 5-ampere discharging rate, the temperature being 80° F., at the beginning of charge and at the beginning of discharge.

197. *Dimensions of batteries.*—The over-all width of the battery measured from side to side of case, shall not exceed 7½ inches.

198. The over-all length of the battery measured from end to end of case, including handles, shall vary according to the capacity of the battery and its details of design. Handles shall, as standard, be placed at the ends of the battery. The space occupied by such handles and hold-down devices shall be in the direction of the length of the battery only and not in the direction of its width. The over-all height of the battery, measured from bottom of case to top of handles, shall not exceed 9½ inches.

199. *Rating of battery.*—The battery shall be rated at the capacity in ampere-hours of the battery when discharged continuously at a 5-ampere rate to a final voltage of 1.8 per cell, the temperature of the battery beginning such discharge being 80° F.

200. *Hydrometer.*—Furnish with each battery a battery hydrometer syringe of best make for measuring the specific gravity of the electrolyte. It must be so designed that the top or stem of hydrometer can not stick against the side of syringe when it is held in an approximately vertical position.

201. The hydrometer syringe glass shall be so constructed as to hold the hydrometer in a proper position, and shall be provided with rubber buffers in the ends to prevent the breaking of the hydrometer.

202. The lower end of syringe glass shall be provided with a suitable length of best quality rubber tubing.

203. The stem of hydrometer shall be marked in specific gravity, and also marked to indicate when battery is fully charged, when one-half charged, and when completely discharged.

204. *Battery jars.*—The battery jars, complete, including covers, vents, and terminal bushings, must be molded from best quality hard rubber-compound, properly vulcanized. The jars shall be not less than ¼ inch thick at all points, and shall be provided with suitable supports for plates at bottom of jar, and a large capacity under plates for the accumulation of sludge without touching plates.

205. The rubber compound must have a high tensile strength and sufficient elongation to prevent excessive brittleness, and must not materially increase in brittleness with age.

206. The entire rubber jar must be capable of withstanding an alternating potential of not less than 25,000 volts for one minute without puncture.

207. *Installation of battery.*—The battery must be installed in a readily accessible location, which will facilitate adding water to, or the testing of the solution, and which will permit the easy removal of the battery. The battery compartment must be well ventilated and drained, must keep out water, oil, and dirt, and must not afford opportunity for anything to be laid on top of the battery. The battery must have free-air space on all sides, must rest on cleats rather than on a solid bottom, and holding devices must grip the case or handle. A cover, cleat or bar pressing down on the cells or terminals must not be used.

208. The battery must be installed so that neither acid fumes nor overflow of water or electrolyte will cause serious leakage of current.

209. Battery hold-down bolts, if connected to handles or other metal parts at the level of the top of the jars, must be insulated at least one of their two ends.

210. *Cushion mounting.*—The battery shall also be provided with a suitable cushion mounting which will prevent it from being subjected to severe shock or vibration.

211. *Instructions for care of battery.*—Complete printed instructions for the proper care of battery shall be furnished. These instructions shall be in accordance with the latest recommendations of the Society of Automobile Engineers, together with such additional instructions as the manufacturer of battery may consider advisable.

212. These instructions shall be printed on heavy white cardboard of suitable quality, in large-sized type. This card shall be securely mounted under seat board, or in the most suitable location, and covered with two coats of best quality damar varnish.

213. *Transmission.*—The transmission shall be of the selective type and must have not less than four speeds forward and one reverse. It may be integral with the engine assembly forming a unit power plant, or it may be a separate unit, installed on the frame between the engine and differential. If the transmission is installed as a separate unit, two universal joints must be provided between the engine and transmission.

214. The high-speed gear shall be direct without gear reduction in the transmission.

215. The gears of transmission must be cut on suitable gear shapers or gear generating machine, from forged steel blanks of alloy steel of the best quality for the purpose and properly heat treated and accurately adjusted to a quiet running fit under load. These gears must have sufficient width of face and strength to transmit the full power of the engine at all gear ratios, with a proper factor of safety.

216. The splined driving shaft for sliding gears must be made of best quality alloy steel, properly heat treated.

217. It is desirable that the transmission shall be accessible from below the body for inspection, adjustment, or repair. The transmission shall be carried on the chassis frame or other part, which is provided with a suitable spring suspension. Transmission gears constructed as an integral part of the rear axle, or in any other manner which does not provide proper spring suspension, will not be acceptable.

218. *Differential.*—The differential shall consist of a forged-steel case, to which the large gear is attached by being bolted or riveted. In worm-drive rear axles this case shall also contain the necessary gears for producing the required differential action, and shall be provided with suitable steel roller or ball bearings of best make. The case shall be supported on its bearings independent of the drive-shaft ends, which shall be properly fitted into the two ends of the case and connect by means of suitable splines to the gears in differential case. The spline connection shall be made in accordance with S. A. E. standards.

219. If bevel driving gears are used, both gears shall be machine cut on suitable gear generators from forged-steel blanks of 3.25 to 3.75 per cent nickel and chromium steel of best quality and properly heat treated.

220. It is preferred that the small bevel drive gear be forged integral with its shaft. This shaft shall be made of 3.25 to 3.75 per cent nickel-chromium steel of best quality, properly heat treated and provided with two sets of taper roller or ball bearings of best make, and provided with suitable means for the ready adjustment of the small bevel gear in relation to the large bevel gear and vice versa. If ball bearings are used, they shall be provided with suitable means to take care of thrust loads.

221. The differential housing must be oil-tight and must have an inspection plate, giving ready access to the inside of housing. An oil-filler plug must be provided at a proper height to act as an overflow in filling. If the oil-filler plug is located in the inspection plate, the studs for holding the plate must be so arranged as to prevent the plate from being reversed. The differential complete must be readily removable after removing the full floating splined drive shafts.

222. *Rear axle.*—The trucks may be either internal-gear drive, chain drive, worm-gear drive, or bevel gear drive.

223. The design, material, and construction of the rear axle and final drive shall be in every respect in accordance with the best standard practice.

224. Provision must be made for the thorough lubrication of all bearings with the minimum attention necessary, and means must be provided for the protection of all bearings against water, dust, or dirt. If the rear axle is bevel, gear drive, or worm-gear drive, suitable truss rods with turnbuckles must be installed, unless the axle is provided with a pressed-steel axle housing which does not require truss rods.

225. *Internal-gear drive.*—If the final drive is an internal gear, provision must be made for entirely inclosing the driving gears and for retaining the lubricating oil or grease and for preventing same from getting onto the brake bands.

226. Both the small spur driving pinion and the large internal gear shall be machine cut from drop-forged steel blanks. The internal-gear ring may be made of carbon steel of best quality for the purpose, but the small driving gear must be made of best quality chromium-vanadium steel or other steel equally suitable. Both gears must have wide faces and must be so designed and constructed as to readily withstand the maximum power of the engine under the most severe service conditions with a proper factor of safety.

227. All gears connected with this drive must be heat treated in the most suitable manner. The internal gear must be pressed onto turned flange on the wheel hub and then firmly secured with suitable rivets.

228. The jack shafts shall be made of best quality chromium-nickel steel, must be properly splined at each end for connecting with driving gear and differential, and shall be provided at each end with steel roller bearings of best quality. These jack shafts shall be inclosed in steel tubing having flexible end connections in both the differential housing and the internal-gear case and these flexible connections shall be provided with suitable felt washers.

229. The complete differential with housing shall be firmly bolted with a proper number of bolts to the enlarged center of a drop-forged steel axle, having an I-beam section. This I-beam axle shall be forged from best quality carbon steel or equal, and properly heat treated. The wheel spindles shall be made of best quality chromium-vanadium steel, properly heat treated, and hot shrunk into the ends of the axle.

230. *Front axle.*—The front axle shall be of I-beam section, drop forged from a single piece of carbon steel or alloy steel. The steering knuckles, and the steering knuckle levers shall be drop forged from alloy steel of best quality for the purpose, and properly heat treated. The wheel spindles shall be provided with steel roller bearings of best quality, and provided with proper means of lubrication. The wheel hubs and bearings of both front and rear axles must be so designed as to prevent the entrance of water, dust, or dirt, and also must prevent the leakage of grease from the hubs.

231. *Brakes.*—Two independent sets of double-acting brakes shall be provided. The emergency brake must act directly on the rear wheels, and be operated by a hand lever with catch for holding the brakes in any position. Service brakes may act directly on the rear wheels or on the drive shaft, and must be operated by a pedal. Brakes must be lined with an approved friction material, and must be so constructed that they may be readily adjusted and securely locked in adjustment without removing the wheels or other parts.

232. Brake rods are to be sufficiently stiff to prevent whipping or rattling.

233. Brakes must be sufficiently powerful either to slip the wheels or stop the truck within a distance of not more than 20 feet, with either the service brakes or the emergency brakes, when the normally loaded truck is running on a level, hard, and dry macadam road at a speed of 14 miles per hour.

234. Both the service brakes and the emergency brakes must be readily adjustable for taking up wear, and must be provided with as large an amount of radiating surface as practicable. Provision must also be made for holding the braking surfaces on brake bands or brake shoes concentric with the brake drum surface. The brakes must be so designed as to release completely and not drag at any point when the brake lever or pedal is released. The brake drums must be exactly circular, and bolted to the wheels with suitable bolts, and located in such a manner as to be concentric with the center of wheel. Provision must also be made for preventing an accumulation of oil or grease on the brakes, or brake bands, which would destroy the effectiveness of the brakes.

235. All brakes must be mounted in such a manner that the braking strains will be taken by parts which are strong enough to withstand these strains under the most severe braking conditions.

236. The rear-wheel brakes shall be equally effective either with or without load.

237. *Frame.*—The frame shall be constructed of heat-treated pressed steel or standard rolled sections. The frame and suspension must be so designed as to prevent cramping of any part, due to distortion of frame because of uneven road conditions.

238. It must have sufficient depth, thickness of material, and width of flange to withstand all strains which may be put on same under the most severe service conditions, with a liberal factor of safety.

239. The frame shall be reinforced at proper intervals with suitable cross members thoroughly fastened to the frame with hot rivets or filled bolts riveted over. All holes in the frame shall be drilled, not punched. Suitable pigtail towing hooks shall be attached to the frame, two at the front and two at the rear. These towing hooks shall be bolted to the sides of frame.

240. A suitable towing hook shall also be installed in the center of the rear frame cross member and provided with suitable spiral spring. This towing hook shall have spiral springs to resist both tension and compression, and must have a shank not less than 1 inch in diameter, and provided with a hook which is designed in such a manner as to prevent the draw bar from pulling from the point of hook.

241. The frame shall be provided with two best quality, dressed oak sills, one bolted on top of each frame side member. These sills shall be the same width as the flange on frame, and shall be of proper depth to give not less than 6 inches clearance between the rear tires and the side sill of body as shown on drawing No. 3-1343C, Quartermaster General's Office, June, 1916. These sills shall be gained over all gusset plates or other irregularities on the frame, and shall be provided with not less than 10 $\frac{1}{2}$ -inch saddle bolts, two angle plates with bolts as shown on drawing of body, and bolts of proper length for fastening body bolsters to sills. The sills shall be painted with three coats of paint of the composition given on drawing.

242. *Drive shaft.*—The propeller shaft connecting the transmission with the rear axle and differential must be of suitable size and strength to properly transmit the full power of the engine at all gear ratios, under the most severe service conditions. It must also be of such design and must be supported in such a manner as to prevent whipping or excessive vibration at all reasonable coasting speeds. The slip joint shall be fitted with an S. A. E. standard or similar spline connection.

243. Two universal joints must be provided between the transmission and differential. These universal joints must be so designed as to contain a proper quantity of

lubricating grease, and must each be provided with a tight leather boot made of best quality, first-cut leather.

244. These leather boots must be provided irrespective of the type of universal joint which is employed, and must be provided at each end of boot with suitable screw clamps.

245. *Clutch.*—The clutch may be either of leather-faced cone type, multiple disk, or single disk type. The multiple disk type of clutch is preferred. It must have sufficient strength to transmit full power of the engine at all speeds, must be easily accessible for repair or replacement of parts, and must be provided with a suitable arrangement for permitting easy engagement which will not require frequent adjustment or renewal of leather or friction material. The clutch must be capable of withstanding the severe service required when hauling trailers carrying loads at least equal to the load carried on truck.

246. It is desirable that the clutch be readily adjustable or provided with a spring which will give uniform action of clutch during the wearing life of the friction material.

247. The clutch must be readily removable without disturbing the transmission, steering gear, motor, or other important parts, except in the case of a unit power plant, and must be provided with an efficient brake in order to stop the spinning of clutch. The action of the clutch must not be affected by changes in atmospheric conditions, and the clutch must engage without grabbing at all engine speeds.

248. *Steering gear and wheel.*—The steering gear may be either the worm-and-wheel type or the screw-and-nut type, and means shall be provided for its thorough lubrication. Adjustments must be possible without removing the steering assembly from the frame.

249. A notched grip steering wheel of best quality shall be provided, having an outside diameter of not less than 12 inches. The steering post must be rigidly mounted to prevent vibration, and must be provided with both spark advance and throttle levers. The lever sector for spark lever must be plainly marked "Start" and "Run," for the most suitable starting and running positions of the spark advance lever.

250. The gear reduction and length of levers on steering gear must be such as to give easy turning action with the fully loaded truck, but the gear reduction must not be so slow as to prevent sufficiently quick turning of the wheels in steering.

251. The steering cross road must be located back of the front axle in order that the front axle may protect it against damage from obstructions, and it must be above the bottom edge of the axle at all points. Specify protection of fore and aft connections.

252. All steering connecting-rod joints shall be hardened steel sockets, held by springs in close contact with hardened steel balls. The steering cross-rod joints may be of the ball-and-socket or clevis type.

253. *Wheels.*—The wheels shall be of suitable size for the use of 36-inch S. A. E. demountable solid tires, and shall be either best quality wooden or cast-steel wheels, of proper design, strength, and construction, and made in accordance with the best standard practice.

254. If the wheels are made of wood the spokes must be made of best quality selected, straight-grain hickory, and thoroughly seasoned, and the wheels provided with S. A. E. felloe bands. The felloes shall be constructed of best quality ash, thoroughly seasoned, and free from defects. The wheels shall be of suitable size and design for use of 36 by 4 inch single, solid demountable rubber tires, on front wheels and 36 by 4 inch dual, or 36 by 7 inch single, solid, demountable tires on rear wheels. All wheels shall be of proper strength to resist the vertical and lateral loads in the most severe service and with the maximum loads and speed for which the truck was constructed.

255. The ends of all spokes must rest on the inside of the felloe.

256. The hubs of wheels shall be made of best quality cast or forged steel, free from blow holes which will impair the strength or finish of finished hub, and must be provided with best quality hardened and ground roller bearings of proper size.

257. Complete detail and assembly drawings, showing the construction, material, and dimensions of all parts of the wheels must be submitted.

258. *Hub odometer.*—A hub odometer of best make, and of suitable design and construction for most satisfactory use on motor trucks, shall be provided and installed on one of the front wheels. This odometer shall have not less than five figures in the dial, and provision shall be made to prevent leakage of grease into mechanism.

259. *Tires.*—On two-wheel drive trucks the tires shall be 36 by 4 inch dual, or 36 by 7 inch single tires, on rear wheels, and 36 by 4 inch single tires on front wheels, both front and rear tires demountable.

260. On four-wheel drive trucks the tires shall be 36 by 6 inches, single, demountable, both front and rear.

261. All tires shall be best quality solid rubber tires on hard rubber base, with S. A. E. steel rims. A sample section of the rubber tire and rim must be submitted with each proposal.

262. The following data must be submitted in reference to the tires which it is proposed to furnish:

- (a) Diameter and width of front tires.
- (b) Diameter and width of rear tires and whether single or dual.
- (c) Total area of rubber, both soft and hard, in tire section.
- (d) Area of rubber above top of channel.
- (e) Specific gravity of soft rubber.
- (f) Tensile strength in pounds per square inch at given temperature.
- (g) Stretch and set of 2-inch lengths of rubber in small strips, at given temperature.
- (h) Per cent by volume of fine Para rubber in tires.
- (i) Per cent by volume of other rubbers in tires.
- (j) Guaranteed mileage of tires if mileage is run in one year.
- (k) Guaranteed mileage of tires if mileage is run in two years.
- (l) Trade name of tire.
- (m) Name of manufacturer of tire.

263. All tires furnished with the entire lot of trucks must be the same type and size and must be made by the same tire manufacturer, unless the tires of other manufacturers will fit the same demountable rim.

264. *Gasoline tank.*—A suitable drawn-steel gasoline tank shall be provided, having a capacity of not less than 30 gallons. This tank shall be thoroughly tinned both inside and outside.

265. A metal partition shall be installed in the inside of tank of such height as to give a capacity of 6 gallons on each side of the partition. Suitable baffle plates shall be installed on each side of partition in order to prevent excessive splashing. The connection from tank to carburetor shall be made from the bottom of each compartment, through a three-way cock, thus giving a positive reserve supply of 6 gallons.

266. If a vacuum system or a pressure system is provided, the three-way cock may be installed at the top of tank with the supply pipes extending from same to the bottom of each compartment in tank.

267. A suitable gasoline strainer with drain cock shall be installed in a readily accessible location, and in the gasoline line between the tank and carburetor, or between the gasoline tank and vacuum feed tank. The gasoline pipe line shall consist of brass or copper tubing, not smaller than five-sixteenths of an inch outside diameter, and arranged so as to completely drain through either the tank, carburetor, or strainer.

268. Suitable means must be provided for draining the gasoline from a flooding carburetor on to the ground without permitting any gasoline to get into the engine pan or to accumulate on any part of the chassis.

269. The gasoline tank must be installed high enough to permit the gasoline to flow to the carburetor when the truck is climbing the maximum grade which it is capable of negotiating under the most favorable road conditions, and with the minimum amount of gasoline in the tank. If necessary, a pressure feed system may be employed.

270. *Springs.*—The chassis spring suspension must be of such design and construction as to relieve the body and chassis above springs of excessive vibration when the vehicle is traveling empty or partially loaded over rough surfaces at maximum speed.

271. Springs must be made of alloy steel properly heat treated, not lower in quality than required to develop the following physical properties:

Minimum elastic limit.....	pounds per square inch..	170,000
Tensile strength.....	do.....	210,000
Elongation.....	per cent..	6
Brinnell hardness.....		390-410
Schlerescope.....		53-56

272. Spring eyes must be provided with phosphor bronze or soft steel bushings, pressed in and reamed in position to the S. A. E. limits of tolerance for such bushings. Bushings must have suitable lubricating channels, and conform to S. A. E. standard of wall thickness. If phosphor bronze is used, it must be equal to S. A. E. specification No. 26.

273. Spring eyebolts must be hardened and not smaller in diameter than the size mentioned in the table in paragraph 283. Eyebolts must be securely anchored to prevent turning in the spring shackle and be provided with suitable means for lubrication.

274. Spring shackle bolts or crossbars must be properly hardened on bearing surface and be so designed as to provide at least equal projected bearing area to that provided by the eyebolts. Where shackle bolts are used in connection with bar shackles, they must be provided with suitable means of lubrication and be securely anchored to prevent turning in the shackle.

275. Spring shackles must be made of a material equal to S. A. E. specification No. 12-35 for steel castings, and heat treated. They must have a center to center distance not less than the spring width and may be of two types—bar shackles formed of two plates with a connecting bar formed integral with them, or yoke shackles, having one end open and the other end connected and adapted to receive the shackle pin or bar. Where yoke shackles are used they must be bushed at the shackle pin or bar end with a material equal to S. A. E. specification No. 26 or soft steel, bushing to have one-eighth inch walls, lubricating channels, and suitable means of lubrication. Yoke shackles must be so designed as to provide projected bearing area at the closed end at least equal to that of the spring eyes. Rear spring shackles must be in tension.

276. Shackle hangers, when used in connection with bar shackles, must be bushed with a material equal to S. A. E. specification No. 26 or soft steel, said bushings to have one-eighth inch walls and be provided with suitable lubricating channels and means of lubrication.

277.—*Shackle position.*—In the design of springs and the assembly of same on chassis, the spring shackles must stand in approximately a vertical position when the spring is under full load, except on chain-driven vehicles, where shackles must stand at an angle sufficient to allow chain adjustment without cramping the spring main plates.

278. Spring leaves must be held against longitudinal movement by means of an alloy steel center bolt of proper size, by an indentation in the center of each leaf, or by a combination of those methods. If center bolts are used, the heads shall conform to S. A. E. standard and be provided with snug-fitting S. A. E. standard center bolt nuts and means provided for locking the nuts in position. Springs with shrunk on center bands will not be acceptable because of the difficulty of making repairs in field service. Center fastening must be shown in detail on the drawing mentioned in paragraph 293.

279. Spring clips must be made of alloy steel, properly heat treated, of a suitable quality to develop physical properties equal to the following:

Elastic limit, 100,000 pounds per square inch.

Tensile strength, 130,000 pounds per square inch.

Elongation in 2 inches, 20 per cent.

Reduction of area, 60 per cent.

Brinnell hardness, 295.

Schleroscope, 35.

These spring clips must not be smaller in diameter than the size mentioned in the table in paragraph 237.

Spring clips must have S. A. E. standard threads and be provided with snug-fitting nuts of a length equal to one and one-half times the diameter of the spring clips, as mentioned in S. A. E. standards.

The chemical specifications, physical properties, and heat treatment must be given.

Nuts may be of carbon steel.

280. Metal spring chairs must be provided between springs and spring seats. Chairs must be so designed as to be held by the spring clips against longitudinal movement and have one face shaped to conform to the shape of the spring when the spring is free or without load.

The center of the chair must be recessed to properly receive the center fastening of the spring. Spring chairs may be omitted where the spring seat is shaped to conform to the shape of the spring when the spring is free.

281. Pressure blocks of a material equal to S. A. E. specification No. 12-35 for steel castings, heat treated, must be provided between the spring clips and the spring, and must be grooved and conform to the shape of the spring clips where in contact with the clips.

The face of pressure blocks must conform to the shape of the spring when the spring is free.

282. *Permanent stops.*—All vehicles must be provided with permanent stops which will prevent the springs from being deflected to a point at which the stress will be greater than 75 per cent of the elastic limit of the material from which the springs are made. It is desirable that yielding bumpers also should be provided.

283. The following table gives the permissible width of springs, minimum diameter of eye bolts, and minimum diameter of spring clips for both front and rear springs:

Location of spring.	Approximate load for spring.	Width.	Eye diameter.	Spring clip alloy steel, diameter.
	<i>Pounds.</i>	<i>Inches.</i>	<i>Inches.</i>	<i>Inch.</i>
Front.....	700 to 1,050	2½	¾	¾
	1,000 to 1,250	2½	¾	¾
	1,200 to 1,550	3	¾	¾
	1,500 to 1,850	3	¾	¾
Rear.....	1,250 to 1,500	2½	¾	¾
	1,600 to 1,900	2½	1	¾
	1,900 to 2,500	3	1	¾
	2,500 to 3,500	3	1½	¾
	3,880 to 4,500	3½	1½	¾

In case the rear springs take either drive, torque, or drive and torque, then one-eighth inch must be added to the above clip diameters, and one-fourth inch to spring eye diameters. Where rear springs are underslung, add one-eighth inch to clip diameters.

284. The use of carbon-steel spring clips will not be permitted.
285. *Rebound clip*.—A suitable number of rebound clips must be provided on each spring and attached in such manner as to retain their proper position, and if riveted in position must be provided with a spacer one thirty-second of an inch longer than the spring width between the open ends of the clips. The distance between the spacer and the face of the nearest spring leaf must not be greater than three-sixteenths of an inch.
286. *Lubrication*.—The lubrication of all spring connections must be through grease or oil cups, which must be so located as to be readily accessible and of ample capacity and so designed as to prevent any part of the cup shaking loose through vibration. When cups are not formed integral with the spring connections, they must be screwed in position with standard one-quarter inch taper pipe thread. At least four threads of shank must be engaged.
287. Springs must be provided with suitable means for retaining the leaves in proper alignment with each other. The method used must be shown in detail in the drawing mentioned in paragraph 293.
288. A drawing must be furnished showing in detail the method of fastening leaves at spring center; the number, location, and method of fastening rebound clips and the method of retaining the leaves in proper alignment with each other. This drawing must also bear in tabulated form the following information: Chemical specifications of steel from which springs are made.

HEAT TREATMENT.

- Physical properties after heat treatment including Brinall and Scleroscope test.
- (a) Type of spring.
 - (b) Width of spring, nominal.
 - (c) Width of spring at eyes.
 - (d) Length of spring under load, front end (center bolt to bearing point or eyes).
 - (e) Length of spring under load, rear end (center bolt to bearing point or eyes).
 - (f) Height of spring under load, measuring from short leaf to line drawn through center of bearing point or eyes.
 - (g) Flexibility in pounds per inch of deflection.
 - (h) Length of short leaf.
 - (i) Thickness and number of leaves and of individual leaves counting from main leaf.
 - (j) Inside diameter of bushing.
 - (k) Outside diameter of bushing.
 - (l) Diameter of center bolt.
 - (m) Diameter of center bolt head.
 - (n) Height of center bolt head.
289. Scale formed on leaves during heat treatment shall be removed as thoroughly as possible without breaking surface skin.

290. All springs must be tested in accordance with the recommendations of the S. A. E., and must fully meet with the requirements of said test as to variations in height, flexibility, and permanent deflection under conditions of test.

291. Driving power may be transmitted from axle to frame through the medium of radius rods, or through the chassis springs.

292. If power or torque is transmitted through the chassis springs, the design must be such that the vehicle will not be rendered inoperative through breakage of the main or driving leaf of the spring and the axle attachment must be such as to prevent relative longitudinal movement under the extreme pressure imposed at the maximum draw-bar pull.

293. *Bodies.*—Bodies are not to be furnished unless specifically called for. The construction of chassis shall be such as to permit the proper installation of body on same, having inside dimensions of 5 feet 1 inch wide, 10 feet long, and 2 feet high, with the floor of body at a height of not over 45 inches above the ground when the truck is loaded. The length of frame back of driver's seat shall be 10 feet 4 inches.

294. In fastening the body to chassis, neither the frame nor the frame members shall be drilled. The body shall be fastened to the frame by means of suitable bolts, as shown on drawing No. 3-1343C, Quartermaster General's office, 1916.

295. *Painting.*—The entire chassis shall be first thoroughly cleaned of all dirt, grease, or oil, and covered with coat of best quality, rust resisting paint. It shall then be painted with three coats of best quality lead and oil, olive-drab color, of the following composition: Six pounds white lead ground in linseed oil, 1 pound raw umber, 1 pint turpentine, one-half pint japan drier, 1 quart linseed oil.

296. Each coat must be permitted to become thoroughly dry before applying the next coat.

297. *Data with proposals.*—The following information must be furnished with each proposal, and also, all other data called for in these specifications. Illustrations, catalogues, and specifications, showing the construction of the truck bid upon, should also be submitted. Failure to supply this data may be considered to render the proposal informal and result in its rejection.

- (1) Name of manufacturer of motor, _____.
- (2) Bore, _____ inches. Stroke, _____ inches.
- (3) Number of piston rings, _____.
- (4) Type of piston rings, _____.
- (5) Crank shaft bearings:
Number, _____. Type, _____.
Size of each, _____.
- (6) Make and thickness of antifriction metal used, _____.
- (7) Are main bearings and connecting-rod bearings bronze backed?
- (8) Diameter of crank shaft, _____ inches.
- (9) Diameter of crank pin, _____.
- (10) Speed of motor corresponding to truck speed of 14 miles per hour on high gear, _____ revolutions per minute.
- (11) Manufacturer and type of governor, _____.
- (12) Manufacturer and type of carburetor, _____.
- (13) Type of water circulating pump, _____.
- (14) Method of lubrication of motor, _____.
- (15) Manufacturer and type of magneto, _____.
- (16) Manufacturer and type of clutch, _____.
- (17) Manufacturer and type of transmission, _____.
- (18) Gear reduction, crank shaft to rear wheels, _____.
First speed (low gear), _____; second speed, _____; third speed, _____;
fourth speed, _____; reverse, _____.
- (19) Type of drive, gear reduction of transmission only, jackshaft only if chain drive, final drive.
- (20) Manufacturer and type of drive axle, or jack shaft.
- (21) Number of sprocket teeth on jack shaft sprocket, and on wheel sprocket, _____.
- (22) Manufacture of tires, _____. Size and type of tires, _____.
- (23) Maximum depth of frame, _____ inches.
- (24) Thickness of frame stock, _____ inches.
- (25) Kind of steel in frame, _____.
- (26) Manufacturer and type of steering gear, _____.
- (27) Diameter of steering wheel, _____.
- (28) Type of brakes, _____.
- (29) Manufacturer and brand of brake lining used, _____.
- (30) Area of braking surface, emergency brakes, _____.
- (31) Area of braking surface, service brakes, _____.

- (32) Distance required to stop normally loaded truck from speed of 14 miles per hour for 1½-ton truck, and from 12 miles per hour for 3-ton truck, on hard level macadam road ———.
- (33) Diameter of front wheels, ———.
- (34) Diameter of rear wheels, ———.
- (35) Shipping weight of chassis including all accessories and spare parts as specified herein, ———, pounds.
- (36) Weight of chassis only, on front wheels, ———.
- (37) Weight of chassis only, on rear wheels, ———.
- (38) Weight of chassis loaded on front wheels, ———.
- (39) Weight of chassis loaded on rear wheels, ———.
- (40) Type and make of radiator, ———.
- (41) Is radiator spring suspended, ———.
- (42) Water capacity of cooling system, ——— gallons.
- (43) Frontal area of radiator, square inches, ———.
- (44) Depth of radiator core, ——— inches.
- (45) Area of radiator cooling surface, square inches, ———.
- (46) Quantity of water delivered by pump, with engine speeds of 500 and 1,000 revolutions per minute, ———.
- (47) Power required to drive fan, ———.
- (78) Gasoline consumption in pints per horsepower hour on block test, with wide open throttle, and maximum torque at 250 feet, 500 feet, 750 feet, and 1,000 feet, of piston speed per minute.
- (79) The gasoline consumption data above required must be taken with one setting of the carburetor. The carburetor setting must not be changed when testing the engine at different speeds or loads.
- (80) The mechanical horsepower required to drive the engine at a speed of 1,000 feet of piston speed per minute, with carburetor in place, and with throttle wide open, ———.
- (81) Clearance of volume in per cent of piston displacement, ———.
- (82) Number of cylinders in casting, ———.
- (83) Are cylinder heads removable, ———.
- (84) Location of valves, both in head, one in head, and one in ell, two in ell, or tee, ———.
- (85) The net weight of engine complete with flywheel, clutch, carburetor, magneto, pumps, generator, fan, and manifolds, ———.
- (86) Complete valve timing data, ———.
- (87) Gasoline consumption of fully loaded truck, in units per gallon on high gear, when running over smooth macadam roads, ———.

298. *Equipment.*—Diaphragm horn: Furnish and install in a location readily reached from the driver's seat, a diaphragm horn of best make. This horn shall be installed in a rigid manner with proper through bolts, nuts, and lock washers.

Suitable "pig-tail" towing hooks fastened to corners of frame at front and rear.

A suitable swivel towing hook at rear, having a spring take up of proper design which will resist both tension and compression.

Tire chains of best make, complete on all four wheels, with two dozen extra cross chains for same. The drive wheels may be equipped with individual cross chains which fasten to the wheels.

1 pair 6-inch side cutting pliers of best make.

1 pair 7-inch combination gas pliers of best make.

1 jack of best quality, and with suitable height of lift, and strength for the truck.

1 set of socket wrenches, to fit all nuts on truck.

4 spark plugs.

2 exhaust valves.

1 intake valve.

2 exhaust valve springs.

1 intake valve spring.

2 fan belts.

1 set extra hose connection for radiator.

1 extra drain cock for radiator.

2 extra grease cups of each size of trucks.

1 5-pound can soft cup grease.

1 gallon engine cylinder oil in sealed can.

½ gallon gear oil in sealed can.

1 quart kerosene in sealed can.

10 feet No. 10 Brown & Sharpe gage primary copper cable, oil and waterproof.

1 assortment of lock washers, Society American Engineers standard. Furnish 6 washers of each size provided on truck.

- 1 carburetor float.
 - 1 carburetor needle valve.
 - 1 condenser for magneto.
 - 1 condenser for battery timer.
 - 2 extra service brake shoes, complete with adjusting screws.
 - 2 extra emergency brake shoes, complete with adjusting screws.
 - 1 6-inch bastard file.
 - 1 8-inch flat mill file.
 - 1 box assorted cotter pins.
 - 1 rubber or canvas pail, 2½ gallons.
 - 1 small clamp vise of best quality, with 3-inch jaw.
 - 1 cold chisel, ¾ inch long.
 - 1 box grinding compound, must contain two grades.
 - 1 valve-lifting tool.
 - 1 valve-grinding tool.
 - 1 spring for placing under valves when grinding.
 - 1 pinch bar, 6-pound, 42 inches long.
 - 1 best quality grease gun.
 - 1 funnel, 8-inch, heavy, with strainer.
 - 4 gaskets for intake valve gage, and valve cup if used.
 - 4 gaskets for exhaust valve gage and cap if used.
 - 1 cylinder cover gasket, if used.
 - 8 spark plug gaskets.
 - 1 box assorted nuts, plain box, case-hardened. Assortment must include not less than 2 nuts of each size on truck.
 - 1 box nuts, castellated, case-hardened. Assortment must include not less than 2 nuts of each size on truck.
 - ½ dozen lamp wicks, of size used in lamps on truck.
 - 2 leather boots for universal joints, with suitable clamps.
 - 2 leather boots for joints on drag link, with laces.
 - 1 roll heavy gasket paper.
 - 1 fire extinguisher, 1-quart capacity, of best make, with bracket support. Mount in vertical position.
 - One shovel, short handle, square point, D handle, socket strap, best quality crucible steel.
 - One ax, single bit, 4-pound, with hickory handle, all of best quality.
 - One lantern, best quality, with No. 2 burner, guard and suitable globe lift. Must not blow out in the strongest wind.
 - One tow chain, 20 feet long, 5/16-inch links, with ring in one end and hook in the other end.
 - One hundred and fifty feet Manila rope, 5/8-inch diameter.
 - One complete set of all special tools used in the repair or adjustment of the truck.
 - Steel tool box, with lock, to hold all tools, tire chains, and all other tools.
 - Instruction books, oiling diagrams, with instructions for a complete understanding of the care and operation of the truck.
299. *Tests.*—Trucks will be inspected and tested at the factory under the direction of a representative of the Quartermaster Corps and notification shall be sent to the Quartermaster General of the Army when the machines are ready for such inspection. Trucks must be built to stand any reasonable test that the Government may require in its military service. Tests will be made with the truck under loads as specified, and all labor and materials necessary for the tests will be furnished by the contractor.

HENRY G. SHARPE,
Brigadier General, Quartermaster Corps, Acting Quartermaster General.

[Inclosure No. 4.]

STANDARD SPECIFICATIONS FOR GASOLINE MOTOR TRUCKS.

[Capacity, 3 tons. Prepared in the office of the Quartermaster General, Washington, D. C., June, 1916.]

1. The number of trucks required will be stated in the "Instructions to Bidders," issued by the purchasing quartermaster. The prices quoted will be f. o. b. factory, and the truck must be complete in every respect and in proper operating condition.

2. *Quality of materials.*—Except it be otherwise specified all materials are to be the best of their respective kinds, and all labor is to be done in the most thorough and workmanlike manner. In all cases where an article is mentioned in these specifications in connection with the words "best quality," "best make," "proper," or "suitable," the purchasing quartermaster or his authorized representative shall decide what is the best and most suitable to use.

3. *Award of contract.*—The trucks herein specified are to be used in the field service of the Quartermaster Corps, and in the selection of trucks and award of contract, the quality of material, design, workmanship, and suitability for use by the Quartermaster Corps in field service will be given due weight in determining which proposal shall be accepted.

4. *Manufacturers.*—Each bidder must submit a complete list of manufacture and location of factories furnishing any part, either finished or unfinished, assembly, or accessory, which is used in the construction of the trucks, and not made in the factory where the trucks are constructed. This shall not be construed as including bar or sheet stock or structural material. If this information is not given the proposal may be rejected, or in case the proposal is accepted, the Quartermaster Corps reserves the right to name the manufacturer and select the material, apparatus, parts, or accessories, and no others will be substituted for those named.

5. *Employment of convict labor.*—In the performance of work herein specified the contractor shall not, directly or indirectly, employ any person undergoing sentence of imprisonment at hard labor, which may have been imposed by a court of any State, Territory, or municipality having jurisdiction, nor permit such employment by any person furnishing labor or material to said contractor in fulfillment of this agreement.

6. *Patents.*—The contractor shall for all time secure to the Government the free and undisputed right to use any and all patented articles used in the work and shall defend at his own expense any and all suits for infringement of any patent or patents, and in case of adverse claims under patents, the contractor shall pay all awards.

7. *Design.*—The truck must be of well balanced design, and the material a workmanship the highest standard employed in commercial practice. It must be constructed in the most substantial manner, and provided with a suitable spring suspension. All parts of truck must be so designed and constructed as to be readily accessible for adjustment or repair.

8. *Strength of parts.*—All parts of truck from motor to and including driving wheels must be of such size, material, design, and strength as to readily transmit the full power of the motor at the different gear ratios, with a proper factor of safety, with a minimum wear on parts, and with maximum mechanical efficiency.

9. *Interchangeability of parts.*—All parts of trucks must be constructed to definite standard dimensions and proper tolerances, so that any part of same may be replaced and properly fitted and adjusted without requiring additional tool work or machine work on the parts.

10. *Standard parts.*—It is desired that as many parts of the truck as practicable be constructed to standard sizes and design, which will be interchangeable with the same parts made by other manufacturers, or according to S. A. E. standards.

11. *Materials.*—A complete list of all materials used in the construction of the various parts of the truck must be given, together with the chemical composition, and physical properties of same.

12. *Heat treatment.*—When necessary, all steel used in the construction of the truck must be heat treated to develop the best physical properties for the particular purpose for which the material is being used.

13. A complete description of the methods of heat treatment for various purposes and materials must be given, together with a description of the equipment for same.

14. All information in reference to the heat treatment will be considered confidential if so requested by the bidder.

15. *Drawings and data.*—Each bidder will be required to submit complete dimensioned detail and assembly drawings, showing the size and construction of every part of the truck. These drawings must show the shop limits on all parts, and a reference number or letter referred to the list of materials, physical properties, and heat treatment, which list will also be submitted with the proposal. The drawings must be arranged in proper order for filing, and provided with a suitable index which will enable any individual drawing to be readily located. The drawings and data above referred to will not be opened publicly with the proposals, but will be considered confidential. The drawings and data may be submitted direct to the Quartermaster General, Washington, D. C., and should be referred to in each proposal which is submitted.

16. If the drawings and data herein required are on file in the office of the Quartermaster General, they need not again be submitted with the proposal. If any major

changes have been made in the construction of the truck, materials used, or methods of heat treatment since the drawings and data were submitted, details of those changes should be submitted with the proposal.

17. *Service stations.*—Complete information regarding the location of all service stations, the floor area of each station, and the number of men employed in each service station, should be submitted with the proposal.

18. *Departure from specification requirements.*—In case the vehicle on which proposal is submitted does not comply with these specifications, in every particular, the bidder must state definitely in what particulars the vehicle which he proposes to furnish does not comply with specification requirements.

19. *Guaranty.*—Each bidder will be required to guarantee his vehicle or vehicles against defects in material or workmanship for a period of one year. This guarantee shall include the delivery of the defective part or parts to any point in the United States. After the installation of the new part, the defective part will be returned to the manufacturer if he so requests. The manufacturer will pay the transportation charges on all returned parts.

20. The above guarantee shall also apply to all parts and accessories which are not made by the bidder.

21. *Load capacity.*—The carrying capacity of trucks in pay load shall be the rating in tons, and they shall be of sufficient strength and be provided with sufficient power to carry and propel a gross load of 8,930 pounds under the most severe service conditions, with a proper factor of safety.

22. *Road speed.*—The governor on engine shall be set so as to give a road speed of 12 miles per hour, with a maximum governed engine speed of 1,300 revolutions per minute.

23. *Location of control.*—The speed change lever and steering wheel must be located in such a manner as to give either left-hand drive with center control or right-hand drive with right-hand control.

24. *Type of drive.*—The trucks may be provided with any suitable standard type of drive, such as internal gear, bevel gear, worm gear, or chain drive.

25. Preference will be given to that type of final drive which provides the greatest amount of ground clearance, in conjunction with provisions for retaining grease or oil and excluding dirt.

26. Either two-wheel drive or four-wheel drive may be employed.

27. *Fenders.*—Truck will be provided with front fenders only, which must be of suitable design and rigid construction.

28. *Seat and top.*—Seat shall be of proper width for not less than three persons and shall be provided with removable cushion and stationary back rest upholstered with best quality imitation or genuine leather. Top to be of collapsible type, with extra heavy bows and fastening irons, and covered with best quality 12-ounce water-proofed canvas.

29. *Bumper.*—A steel bumper, consisting of curved channel or other suitable section, shall be properly bolted to frame of truck and so placed as not to interfere with the starting crank. Front towing hooks may be secured to this bumper if so desired, and satisfactory attachment is made. No part of the bumper extending in front of the radiator or hood of engine shall be integral with the chassis frame.

30. *Radiator protector.*—Each truck shall be provided with an effective radiator protector, which shall extend the full height and depth of the radiator. This radiator protector shall be constructed of heavy structural steel shapes or steel castings, and shall be firmly bolted to the chassis frame. It must be so installed as to not interfere with the starting crank. Complete detail drawings showing the construction of this protector must be submitted.

31. *Ground clearance.*—The ground clearance of all parts of truck, except at drive sprockets and hub brake drums, shall be not less than 11 inches.

32. *Turning circle.*—The truck shall be so designed as to turn in a circle of not more than 55 feet, measured from outside wheel tracks.

33. *Gage.*—It is desirable that the gage of front and rear wheels shall be 61½ inches, measured from center to center of felloe bands, in order that the truck may track with 1½-ton trucks of the same gage.

34. *Wheel base.*—The wheel base must be suitable for the use of a 12-foot body and shall be not less than 124 inches or more than 150 inches.

35. *Engine.*—The engine must be of the four cycle type water cooled, having less than four cylinders, and provided with poppet valves. It shall have a total piston displacement of not less than 350 cubic inches, but a larger engine is desirable. It must be under a removable hood forward of the driver. All bearings shall be so designed as to be easily adjusted to take up wear, and all piston valve stems and push rods shall be properly bushed. If the crank case is of a split type, the lower half of case must be removable without disturbing bearings.

36. *Suspension*.—The engine must be mounted with a three-point suspension, or on a subframe having a suitable three-point suspension, which will effectively prevent the distortion of frame from straining any part of engine or transmission. The single flexible pin connection shall be hardened and ground and provided with a phosphor bronze bushing or a hardened and ground steel bushing.

37. *Tractive effort*.—The vehicles shall have sufficient power to carry its gross load on high gear up a 4 per cent grade, and on low gear up a 25 per cent grade, both grades being on a hard road surface. It shall also be able to stop and start with its gross load on the 25 per cent grade.

38. *Governor*.—A centrifugal type motor speed limiting governor of approved make shall be provided and adjusted so as to prevent the truck from exceeding a speed of 12 miles per hour on high gear. The governor shall be adjustable and must have provision for sealing with ordinary lead seals after adjustment.

39. *Crank case*.—The crank case may be of the barrel type or divided in a horizontal plane, with all bearings in the upper section. It must be so designed as to be light in weight and also of proper strength, and must be provided with suitable ribbing in order to secure a strong case, free from distortion or weakness, and without excessive weight. It must also be so designed as to permit any piston to be removed from its cylinder and taken out of the case without removing the cylinder or crank shaft.

40. All oiling receptacles, pipes, and oil guides, except the constant level troughs for connecting rods, shall be either pressed or cast integral with the crank case, or the oil pipes may consist of external leads. If external leads are used they shall be short and rigid or properly clipped to prevent vibration and chafing.

41. The crank case must be a smooth casting, free from defects of material, design, or construction.

42. All joints or connections in crank case shall be made thoroughly oil-tight.

43. The bearings for crank shaft shall be in the upper section if the case is made in two sections. The bearings shall consist of heavy split bronze bushings, and at least one set of these bushings shall be provided with side flanges to take end thrust. These bushings shall be faced with a suitable thickness of best quality bearing metal and provided with proper oil grooves, or properly designed ball or roller bearings shall be provided. The bearing caps shall be of proper design and made of material suitable for the purpose. These caps shall be held in place by means of alloy steel bolts of proper size, provided with castellated nuts, with suitable cottor pins. Not less than three main bearings shall be provided in a four-cylinder engine.

44. The main crank shaft bearings and the connecting-rod bearings shall be finished to an accurate bearing surface, unless the bearings are of the ball or roller type.

45. *Oil capacity*.—The oil reservoir of engine must be so designed as to hold sufficient lubricating oil to permit the truck to run fully loaded a distance of not less than 200 miles over ordinary solid roads without replenishing the supply of oil.

46. The oil filler tube on crank case shall be provided with a nonremovable fine mesh, brass screen, and also another screen of same construction which is removable.

47. *Crank shaft*.—The crank shaft shall be forged from a single piece of chromium nickel, or 30–40 carbon steel of suitable quality for the purpose, and heat-treated to develop the proper physical properties, and shall have not less than three main bearings for a four-cylinder engine.

48. The crank shaft shall be sufficiently large in section at all points to prevent objectionable torsional or lateral vibration at all practicable engine speeds and loads.

49. Both crank bearings and main bearings shall be large in area in order to give low-bearing pressures, and long bearing life without replacement or readjustment.

50. The crank pins and main bearings of crank shaft must be ground to a high finish.

51. The crank shaft must be accurately balanced for static balance.

52. Suitable means must be provided for preventing cylinder oil from creeping out of the crank case at the end of bearings.

53. The flywheel flange must be forged integral with the crank shaft. This flange must be large in diameter and so designed as to insure an accurate centering of the flywheel on the flange. The bolts used in fastening the flywheel to crank shaft shall be of suitable diameter and material, and properly heat treated. If the bolts take the driving strain, they shall be of large diameter, and tightly fitted in reamed holes in both members.

54. *Cylinder*.—The cylinders shall be cast from best quality grey iron and must be free from sand holes, blow holes, cold shuts, or other imperfections. The bore of finished cylinders must be exactly circular and the same diameter from end to end, with limits of plus or minus, 0.0005 inch.

55. The water jackets of cylinders must be tested under a hydrostatic pressure of 100 pounds per square inch, which test they must withstand without leaking.

56. The cylinders must be rigidly bolted to the crank case by means of a proper number of stud bolts in crank case, and double nuts, or single long type of tight fitting nuts. The stud bolts must accurately fit the holes in cylinder casting, and prevent the cylinders from getting out of alignment.

57. The water passages in jackets shall be of large area and volume, must extend entirely around the valve seats, and must offer as little obstruction as practicable to the flow of water. The water passages shall be so designed as to secure a uniform flow of water through all parts of the jacket. The water must circulate freely between the cylinders and the jackets must be free from air pockets, or dead ends where the water is unable to circulate freely. The jacket space must be so designed that all water will drain completely from the jackets when the lower drain cock on radiator or water-circulating system is opened.

58. The compression space in each cylinder must be accurately calibrated, and the cylinders selected so that the clearance volume of each cylinder is the same as that of any other for the same engine within one-half cubic centimeter.

59. *Pistons.*—The pistons shall be designed and constructed in accordance with the best standard practice. They shall be light in weight, heavily ribbed to secure proper strength and made of best quality grey cast iron, free from blow holes, sand holes, shifted cores, or other imperfections. They shall be properly annealed, machined with light cuts to avoid distortion, and ground to a high finish, proper tolerance, and a suitable clearance in cylinders.

60. If the pistons are made of cast iron, the clearance between maximum diameter of piston and the diameter of cylinder bore shall be not less than 0.002 inch or more than 0.004 inch. They shall be properly tapered or relieved, at the head end to provide for expansion, and shall have an internal stiffening flange at the open end.

61. The pistons shall be of such length as to give a low bearing pressure on the cylinder walls. The piston must also be so designed and constructed as to avoid slapping at all engine speeds and loads.

62. The pistons complete with rings and piston pins must be selected for weight, so that each piston will be the same in weight as that of any other piston for the same engine.

63. *Piston pins.*—The piston pins shall be hollow, with a wall of proper thickness. They shall be made of steel of suitable quality for the purpose, properly case hardened, and ground to a high finish and proper tolerance.

64. *Piston rings and grooves.*—The piston shall be provided with at least three ring grooves of proper width and depth, all located between the wrist pin and the head end of piston. These grooves shall be ground to a high finish at the sides. An oil groove shall also be provided which will carry oil to each end of the piston pin and furnish lubrication for same.

65. If the triple type of ring is used, having one internal ring and two external rings, two ring grooves may be used, each provided with a triple ring, or one groove may be provided with a triple ring and the other with the ordinary type of single ring.

66. The single rings shall be ground to a high finish and proper tolerance on the outside periphery and on the sides. The outside rings of triple rings must be ground all over, and the inside ring of triple ring must be ground on the outside and on the sides.

67. The rings must be of proper tension, and installed with only sufficient opening between the ends as to provide for expansion of the rings under maximum temperature conditions.

68. Suitable means must be provided for preventing an excess of oil from working past the piston rings and into the combustion space, and at the same time securing proper lubrication of the piston and all bearings connected with the crank case.

69. *Connecting rods.*—The connecting rods shall be of I-beam section, drop forged from best quality steel, equal to 30-40 carbon, and properly heat treated.

70. The crank end of the connecting rods shall be provided with bronze bushings faced with a proper thickness of best quality bearing metal.

71. These bearings shall be scraped to a proper fit with the crank and shall be held in place with suitable dowel pin. The bearing metal shall be provided with proper grooves and oil holes for lubrication.

72. If the bearing on piston pin is in the connecting rod end, a suitable solid phosphor bronze bushing, pressed in, shall be used in connecting rod end.

73. The bearing at each end of connecting rod shall be large enough to withstand long periods of severe service without the necessity of replacement or adjustment.

74. The cap end of connecting rod shall be made of the same material as the connecting rod and shall be held to the rod and bearings by means of suitable bolt made of best quality $3\frac{1}{2}$ per cent nickel steel or equal, properly heat treated, as provided with suitable castellated nuts and cotter pins. The connecting rod cap shall be provided with a suitable scoop for picking up oil from the constant level oil receptacles and delivering same to the bearings, or shall be provided with suitable force feed lubrication.

75. The complete connecting rods for each engine must be selected for weight so that each connecting rod shall be approximately of the same weight as that of any other connecting rod for the same engine. These connecting rods must have also their cylinders centers of gravity at approximately the same point on each rod.

76. *Valves.*—Both intake and exhaust valves must have ample lift must be large in diameter in proportion to cylinder volume in order to insure complete filling of the cylinders when running at the maximum governed speed of engine.

77. The exhaust valves must be constructed of best quality 13-16 per cent tungsten steel.

78. The complete composition of the steel must be stated definitely and all valves must be heat treated to develop the proper physical properties.

79. The intake valves must be made of best quality 3.5 per cent nickel-steel or equal. If the intake valves and exhaust valves are interchangeable in size, then the intake must be made of the same material above specified for exhaust valves.

80. All valves must be properly machined and the stem and face of valves ground to a proper finish and tolerance.

81. The valves must be ground to a thoroughly gas-tight fit in the valve seat.

82. The valves must be constructed of one piece for both stem and head, must have a large radius fillet between the stem and head, and must be provided with 30-45 degree seats.

83. All parts of valve mechanism must be completely inclosed in order to prevent the entrance of dust or dirt. If the engine is of the L-head or T-head type the valve springs, stems and tappets must be inclosed by a suitable readily removable cover plate, and if the engine is of the valve-in-head type, the over head valve mechanism must be completely inclosed with a suitable readily removable cover, or the bearings for rocker arms must be provided with suitable felt washers to prevent the entrance of dust or dirt.

84. *Valve springs.*—The springs for both intake and exhaust valves shall be made of best quality steel, of proper strength for the maximum speed of the engine, and designated so as to withstand a long period of service without sagging or breaking. These springs shall be heat treated to develop the proper physical properties.

85. *Valve lifters.*—The valve lifter must be made of the most suitable steel and of proper design, with properly hardened wearing surfaces. It must have a suitable adjustment for height which is easily accessible and which will retain the adjustment and not shake loose due to vibration. This adjusting device must be strong enough to withstand heavy strains with a wrench in adjusting without distorting or stripping of threads.

86. *Valve-lifter guide.*—The engine shall be provided with suitable valve-lifter guides of proper material, which will be readily removable. These guides shall be installed in a proper relation to the valve stem and cam shaft, and so installed that they will not shake loose. They must be long in proportion to the diameter of the valve lifters must be finished in the bore to a smooth cylindrical bearing surface, and must have a proper clearance in relation to the diameter of valve lifter, in order to insure easy working, perfect lubrication, and quiet operation.

87. *Valve stem guides.*—The engine shall also be provided with suitable pressed in cast-iron valve stem guides. These guides shall be made of best quality gray cast iron, free from sand holes or blow holes, and reamed to a proper tolerance and clearance in reference to the diameter of valve stem. The length of guide shall be as long as practicable in order to insure long life, quiet operation, and a proper alignment of the valve.

88. *Cam shaft.*—The cam shaft shall be constructed of carbon steel of best quality for the purpose and the cams properly case hardened, and both the cams and bearings ground to a proper finish and size.

89. The cams must be forged integral with the cam shaft, and the bearings shall be such size as to permit the shaft to be removed without removing the bearings, or the bearings must be readily removable with the cam shaft. The gear connection for cam gear shall be a flange which is forged integral with the cam shaft and provided with a central boss for centering the cam gear.

90. The cams shall be designed and ground to such shape as to secure quiet operation of the engine and maximum torque and shall have wide bearing faces in order to prevent undue wear of the cams or valve lifters.

91. *Cam shaft bearings.*—The cam shaft shall be provided with not less than three bearings for a four-cylinder engine. The cam shaft bearings shall be of the best quality phosphor bronze, or equal bearing metal. They shall be provided with an effective means for securing a proper circulation of oil through the bearings from the crank case splash system or by a pressure oiling system.

92. *Gears.*—The cam shaft gear may be of cast iron, but the smaller gears on crank shaft and on magneto, generator, and pump shaft must be of steel. These gears must be machine cut and all gears accurately adjusted and ground to a quiet running fit under load. They must also have a sufficient width to insure long wearing life.

93. *Carburetor.*—The carburetor must be of such design and provided with such heating devices as will enable it to utilize gasoline having a specific gravity of 58° Baumé, or 0.7446 specific gravity at 60° F., and permit the engine to operate with satisfactory economy and regularity at all speeds and loads.

94. The carburetor must be adjustable and provided with means for readily enriching the mixture when starting in cold weather. A suitable drain cock must be provided at the bottom of the float chamber. The intake manifold must be provided with a suitable water jacket, and the carburetor must be installed in as high a position as practicable.

95. A suitable accelerator pedal must be provided, and also a hand throttle on steering wheel.

96. *Cooling system.*—The cooling water must be pump circulated, and the system shall be so designed that it may be completely drained to prevent freezing. Thermosiphon systems will not be acceptable.

97. The radiator must be of such design as to insure a uniform and free circulation of water, and mounted to withstand severe vibration or twisting without injury. It must be also readily repairable, without special equipment.

98. All parts of radiator in contact with water shall be thoroughly tinned. Suitable baffle plates shall be provided in order to insure a uniform circulation of water through the entire radiator.

99. Ample area for the circulation of air through the radiator shall be provided and also proper outlet area shall be provided to permit the free passage of the heated air away from the rear of engine. Suitable louvers shall also be provided in each side of the engine hood.

100. The radiator shall have a frontal area of not less than 1.3 square inches per cubic inch of piston displacement, and a total radiating surface in radiator of not less than 40 square inches per cubic inch of piston displacement.

101. *Fan.*—The engine shall be provided with a suitable fan which will cause a rapid circulation of air through all parts of the radiator, and insure proper cooling of the circulating water. This fan must be provided with suitable means for the ready adjustment of fan belt. The fan pulley and fan belt driving pulley must be so arranged as to permit of the ready replacement or removal of the belt. The fan belt and fan pulley must be constructed in accordance with Society of Automobile Engineers standards.

102. *Spark plugs.*—The spark plugs shall be constructed in accordance with the latest recommendations of the Society of Automobile Engineers, and the large hexagon type of shell provided with a single sparking point shall be used.

103. The plug must be provided with a porcelain of best make, packed with suitable copper gaskets and held in place with proper bushings and flexible cone.

104. The center electrode shall be made of a metal which will not readily corrode, warp, or be burned by the hot gases, and must be packed thoroughly gas tight inside of the porcelain.

105. The ends of the high-tension cable at spark plugs must be provided with suitable terminals properly secured to the cable and spark plug terminals.

106. The seat for spark plug gaskets shall be finished to a smooth and plain surface, and the seat shall be at right angles to the center line of spark plug.

107. *Lubricating system.*—The engine shall be lubricated by a constant level splash system or pressure system, or a combination of the two methods. The troughs for splash lubrication shall be higher at the rear than at the front in order to give a greater depth of oil when ascending grades.

108. The oil pump must be provided with suitable screens, which are readily removable for cleaning, and which will prevent any solid foreign matter from passing through the screens. It is desirable that the oil pump and screens be so arranged as to make the screens self-cleaning by an intermittent reverse flow of oil.

109. *Muffler.*—The muffler must be of substantial construction and so designed as to give the minimum back pressure and effectively muffle the exhaust. It must be so constructed and installed as to be readily taken apart for cleaning. The final exhaust not to be directed downward.

110. It is desired that the magneto, generator, coil, timer, battery, and muffler be kept as high as practicable.

111. *Starting motor.*—Suitable provision must be made either on the engine or elsewhere, for the installation of a starting motor, of proper size and design. The starting motor is not to be furnished, but the truck must be so arranged as to readily permit of its installation at any time if so desired.

112. *Electric lighting and ignition.*—The truck must also be provided with a suitable electric lighting system and dual ignition system. The electric lighting system shall consist of a generator driven from the power plant, a reverse current voltage cut out, a 120 ampere hour, 6 volt, lead acid, or nickel steel alkali battery, electric lights, fuses, wiring, and other necessary details. The ignition system shall consist of a high tension magneto of best make and a battery and coil ignition system. One distributor and one set of spark plugs may be used in common with the two separate ignition systems. The current for battery ignition will be taken from the electric lighting battery. Both battery ignition and magneto must be readily controllable from the driver's seat, and the spark advance lever on steering wheel must control both ignition systems and give a suitable degree of spark advance for all positions of the spark advance lever. The range of spark advance shall not be less than 30 degrees of crank angularity. The full retard position of the spark lever shall retard the battery spark at least 3 degrees after top center.

113. If the high tension magneto or generator is coupled to a drive shaft, two universal joints or a flexible coupling must be used in the driving connection in order to prevent binding of bearings. The flexible coupling, if used, must provide for parallel and angular displacement.

114. *Generator.*—The generator shall be of the fully inclosed direct-current, shunt, or compound-wound type and must have a continuous capacity of 12 amperes. The voltage of the generator at all speeds above that at which cut out closes, shall be suitable for charging a six-volt storage battery and for supplying current to 6–8 volt tungsten lamps. It must be driven from the engine by means of suitable gears or silent-chain drive. The gears or silent chain drive must be completely inclosed, thoroughly lubricated, and effectively protected from dust and dirt. If driven by means of silent-chain drive, the chain must be readily adjustable. Definite data in reference to the material and construction of chain or gears must be given.

115. *Armature.*—The armature shall be of the laminated-drum type, with the windings thoroughly insulated and so installed in the slots as to effectively resist the action of centrifugal force at the maximum guaranteed speed of armature. After the coils are properly secured in the slots and the armature coil terminals are securely soldered into slots in the ends of commutator segments the entire armature shall be treated with an insulating compound by a suitable impregnating process. The insulating compound shall have suitable insulating qualities and shall not soften under a continuous temperature of 250° F. The armature shall also be of proper electrical, magnetic, and mechanical balance.

116. Suitable means must be provided for preventing oil from the bearings from collecting on the commutator or armature.

117. *Frame.*—The generator shall be constructed with a suitable frame having high magnetic permeability, and fitted with proper end frames.

118. Suitable bearings of best quality shall be fitted in each of the end frames. The bearings shall have proper means for ready lubrication, shall be a proper fit on the armature shaft, and shall not be so loose as to cause vibration of the armature at any practicable engine speed. The ratio of engine to generator speed must be given, and also the maximum permissible speed of the generator. The generator must be run at a constant ratio of engine speed, and no friction drives or constant speed devices will be permitted. The speed of generator in any case must not be more than twice the engine speed. The generator drive connection must be made direct with the engine, or with some part of drive connection between the engine and clutch.

119. The brushes of generator must be the self-lubricating type, having a spring take up which will give a proper tension on the brush during its entire wearing life. The brushes must be easily accessible and readily removed or replaced without removing or loosening other parts, and must have ample area of cross section and area of contact to prevent excessive heating under continuous maximum permissible load. The brushes must be practically sparkless at all speeds, and at all loads from no load to maximum permissible load.

120. *Commutator.*—The commutator must be constructed of best quality hard-forged copper of uniform density, and the segments properly insulated with sheet mica of suitable thickness and proper density to wear equally with the copper segments.

121. *Regulation.*—All voltage and current-regulating devices must be contained in assembly with the generator. No separately mounted controlling devices will be permitted. The use of sliding contact devices for current or voltage regulation, and the use of permanent magnets in the construction of generator is also prohibited.

122. The generator shall be so constructed as to give a proper voltage and current when connected with the storage battery, at all speeds and current values up to maximum rated output, without moving controlling devices of any kind. The current and voltage shall be kept at proper values by the inherent regulation of the generator.

123. *Alternate.*—An alternate proposal is desired giving the amount, either more or less than proposed price, for furnishing a generator the same as above specified, except that it shall be provided with an automatic voltage-regulating device of the vibratory type, having either platinum or silver contact points, and which will keep the voltage of generator practically the same at all loads and speeds above "cut-in" speed, without the necessity of connecting the generator to storage battery. The voltage regulator must be included in the generator assembly, and not mounted separately.

124. *Rate of charge.*—The current output of generator must not be greater than the maximum advisable rate of charge of the storage battery, at the normal engine speeds irrespective of the condition of battery charge.

125. *Charging speed.*—The generator shall begin to charge the battery at an engine speed of not more than 500 revolutions per minute, and at the same time furnish the current necessary for ignition.

126. *Data regarding generator.*—The following data must be submitted in reference to the generator it is proposed to furnish:

(a) The voltage and speed of the generator when the cut-out opens, cutting off the current from generator to battery.

(b) The speed and voltage of generator when the cut-out closes, permitting the current from generator to pass to battery.

(c) The weight of generator without gear of sprocket.

(d) The ratio of speed between engine and generator.

(e) The speed-voltage curve or tabulated data and speed-current curve, or tabulated data, of generator when connected to battery.

(f) The speed-voltage curve or tabulated data of generator when provided with a voltage regulator.

(g) The maximum allowable current output of generator, and the temperature guarantees at maximum output for stated periods.

(h) The power required to drive the generator at maximum rated power output, and at a speed corresponding with an engine piston speed of 1,000 feet per minute.

127. *Waterproof covers.*—The high tension magneto shall be provided with a suitable waterproof cover of proper construction and arranged so as to be securely fastened around magneto and readily removable.

128. *High-tension magneto.*—A high-tension magneto of best make must be installed on the engine, and positively driven either by gears or by a silent chain drive. If driven by gears the gears must run in oil, and if driven by silent chain drive the chain must be readily adjustable. In either case the chain or gears must be completely inclosed, thoroughly lubricated, and effectively protected from dust, water, and dirt.

129. One distributor may be used in common for both battery ignition and for the magneto. The distributor must be of the weather proof type and provided with a suitable safety gap.

130. The breaker points must be of platinum, and the breaker box and contacts must be easily accessible and readily adjustable. The breaker box must completely inclose the breaker mechanism, and prevent the entrance of dust, water, or dirt.

131. The magneto must be provided with a suitable spark advance arrangement, which will enable the magneto to deliver an adequate strength of spark at all positions of the spark advance lever. The definite range of spark advance must be given in the proposal, and must not be less than 35° of crank angularity.

132. The sector for spark advance lever must be plainly marked start and run for the most suitable starting and running positions.

133. With battery ignition the strength of spark must be adequate for all engine speeds, and the spark lag must be as small as practicable. The definite amount of spark lag in degrees of crank angularity must be given for all engine speeds with a fixed setting of the spark advance lever.

134. Complete details of the construction of the magneto with drawings and illustrations must be submitted with proposal.

135. The guaranteed length of spark between needle points must be given with engine running at 100 revolutions per minute, and for both battery ignition and high-tension magneto the lag of spark in degrees of crank angularity must be given for all practicable engine speeds.

136. *Fabric-insulated primary cable.*—All primary cable shall be single flexible copper conductors, fabric insulated. This cable shall be constructed in accordance with the following table:

Number.	Number of wires.	Diameter of wires.	Nominal size of wires.	Circular mils in cable.	Carrying capacity (amperes).	Diameter over wire.	Diameter over braid.	Layers of cambric.
14.....	41	0.0100	30	4.100	.....	0.080	0.20	2
12.....	49	.0113	29	6.208	.....	.102	.23	2
10.....	49	.0142	27	9.854	.....	.128	.25	2
2.....	133	.0226	23	67.764	127	.340	.478	3
1.....	133	.0254	22	85.466	152	.390	.518	3
0.....	133	.0285	21	107.743	202	.427	.568	3
00.....	133	.0320	20	135.926	227	.480	.628	3

All dimensions in inches.

137. *Stranding.*—No. 14 to be bunched; Nos. 12 and 10 to be bunched or rope lay; Nos. 2, 1, 0, 00 to be rope lay.

138. The tinned and stranded copper conductors shall first be covered with a layer of closely wrapped cotton, varnished, the two or three layers of varnished cambric applied, and the whole covered with a heavy, closely woven cotton braid. The braid will then be saturated with an oil and moisture-proof varnish.

139. The completed cable shall be capable of withstanding for one minute a potential of 1,500 volts A. C., applied between the copper conductors and a metal coil wrapped around the outside of the cable. The frequency of the test current shall be in accordance with the standardization rules of the A. I. E. E.

140. *High-tension cable.*—All high-tension cable connecting with spark plugs, distributors, high-tension magneto, or the secondary coils, shall be made up of either 26 or 37 copper conductors, thoroughly tinned, and 0.010 inch in diameter, and covered with three layers of rubber compound having a total thickness of not less than 0.100 or 0.125 inch. The cable shall be covered with two layers of heavy, closely woven glazed cotton braid, and the braid treated with two coats of an oil and waterproof varnish.

141. Both the primary and secondary cable shall be constructed and tested in accordance with the latest recommendations of the Society of Automobile Engineers.

142. *Tinning test.*—All copper wires must withstand the following tinning test: Samples will be properly selected to secure an average grade of tinning. The samples will have the insulation carefully removed, and the wires of cable carefully separated and straightened. The wires will then be thoroughly cleaned by means of ether, benzine, gasoline, naphtha, caustic, alkali solution, or hot water and soap, whichever may be found necessary to thoroughly clean the wires.

143. The wires shall then be rinsed in clear water and wiped dry with a soft cotton cloth. The wires will then be immersed for one minute in a solution of hydrochloric acid having a specific gravity of 1.088 at 70° F., and then rinsed in clear water and wiped dry as above specified. The wires shall then be immersed for 30 seconds in a solution of sodium polysulphide having an excess of sulphur, then rinsed in clear water and wiped dry.

144. The complete cycle of operations shall then be repeated, commencing with the immersion in hydrochloric acid and ending with the immersion in the sodium polysulphide solution.

145. Tests of tinning will be made on not less than 10 sets of samples of reasonable length. All wires must withstand one immersion in the hydrochloric acid without blackening in the sodium polysulphide solution, and 75 per cent of the wires must withstand three immersions in the hydrochloric acid without blackening in the sodium polysulphide solution. All tests shall be conducted with the solutions at a temperature of 70° F.

146. *Electric lighting equipment.*—The truck shall be provided with the following electric lighting equipment:

One searchlight, with quick acting vertical and horizontal adjustment, silver-plated brass or copper parabolic reflector, with 21 candle-power tungsten focusing lamp.

One instrument lamp, with 2-candlepower bulb, and 1 tail lamp with 2-candlepower bulb, connected in series.

One portable trouble lamp, 8 candlepower, with cord, and plug with separate socket.

One ammeter of best make, for indicating the charge and discharge of battery.

147. *Searchlight*.—The searchlight shall be not less than 10½ inches in diameter outside of front flange. The body of lamp shall be spun or pressed from one piece of heavy metal. In the design of the lamp no parts shall be used which are liable to shake loose from vibration. The reflector shall be parabolic in form, spun or pressed from brass or copper of suitable thickness and heavily plated.

148. The searchlight shall be provided with a suitable handle and means for clamping the searchlight securely in any desired position. The searchlight shall be installed on the chassis in a location permitting it to be readily operated from the driver's seat, and also in such a position as to be unobstructed from the front.

149. This lamp shall be provided with a single-point bayonet socket with two wire connections, and a suitable focusing device.

150. *Side lamps*.—The two side lamps shall be best quality combination oil and electric, of suitable design and construction, and fitted with standard S. A. E. single-point, grounded return sockets, and 15 candlepower 6–8 volt tungsten bulbs. The oil fonts shall be so designed that they can not rattle or drop out. These lamps shall be made of heavy gage sheet steel or brass, thoroughly riveted and soldered, fully black enameled, and fitted with flat forged steel brackets or installed in dash. They shall have large glass semaphore front lens, and a side lens of green glass. The flat bracket shall be a snug fit in the lamp receptacle for same, and shall be held to lamp by means of a suitable bolt passing through lamp, receptacle, and bracket.

151. *Tail lamp*.—The tail lamp shall be the same as specified for side lamps, except that the large semaphore lens shall be of red glass colored in the glass composition, the side lens shall be of clear glass, and the bulb shall be 2 candlepower, 4 volt, connected in series with bulb of the same size and rating in instrument lamp. The tail lamp bracket shall be made of forged steel.

152. *Trouble lamp*.—The portable trouble lamp shall consist of a suitable hardwood handle through which the cord shall pass, and provided with a Society American Engineers standard, single contact socket, with two connections for wires, a lamp guard of proper design, and an 8 candlepower, 6–8 volt tungsten bulb. The other end of cord shall be provided with a suitable single point combination plug for connecting with a ground return socket. The cord shall be No. 14 Brown & Sharpe gauge flexible, twin-conductor, rubber covered, double braided, packing house cord of best make. The portable trouble lamp shall be provided with a Society American Engineers standard, single point, flush type, flanged socket, installed in a readily accessible location, preferably on the dash, and connected with the lighting switch.

153. *Ammeter*.—Furnish and install in a suitable location a flush type ammeter of best make, having a double scale for indicating the charge and discharge current of battery. It shall be installed in such a location as will permit the same to be readily observed from the driver's seat and properly illuminated by the instrument light.

154. This ammeter shall be connected in the circuit leading from the negative terminal of battery. The ammeter must be so designed as to not be effected by severe vibration. It must have a light moving system and be dead beat in action. It must be thoroughly insulated and so designed as to avoid short circuits due to the loosening of parts.

155. *Extra lamp bulbs*.—The following extra lamp bulbs shall be provided installed in a suitable metal case:

Two 15-candlepower, 6–8 volt, tungsten bulbs of best make, with single-point Ediswan bases.

Two 8-candlepower, 6–8 volt, tungsten bulbs of best make, with single-point Ediswan bases.

Two 2-candlepower, 4-volt, tungsten bulbs of best make, with single-point Ediswan bases, and matches for series burning.

156. The bulb base shall be of heavy seamless steel, with a heavy seamless steel hinged cover with automatic spring catch. The bulbs shall be held securely in place by means of brass springs and a suitable locking device. The case must be of proper size to hold the above lamps without the lamps touching each other or the sides, top, or bottom of the case. The case shall be thoroughly coated both inside and outside with best quality black enamel.

157. *Wiring*.—The truck shall be wired with the system of installation known as the ground-return system. In this system of wiring the chassis frame or bare metal is used as the return circuit.

158. *Conduit*.—Wherever practicable the wires shall be carried in either rigid or flexible metallic conduit. The flexible conduit is preferred. The conduit shall be

securely fastened by means of galvanized straps and galvanized machine screws of proper size. The ends of the conduit must point downward so that the water will not run into the conduit.

159. *Cleats*.—Where wires are not protected with conduit they shall be securely cleated at intervals of not more than 10 inches. Such cleats shall be of galvanized steel of proper thickness and width and secured with suitable screws. Brass machine screws in tapped holes shall be used in all cases where the fastening is to be made on metal.

160. *Clearance*.—When conduit is omitted, no wire shall be nearer to the exhaust pipe than 2 inches.

161. Where conduit is used the minimum clearance between the exhaust pipe and the conduit shall be $1\frac{1}{2}$ inches.

162. A minimum clearance of one-fourth inch shall be securely maintained between conduit and the nearest carburetor, gasoline pipe, gasoline tank, moving rod, or moving lever.

163. *Grounding*.—Wherever an insulated conductor is connected to "ground," the connection shall be installed so as to be readily accessible and removable on the completed truck. In all cases where the connection is made to an iron or steel part, the iron or steel shall be thoroughly tanned at the point where the connection is made, and the ground connection shall be firmly maintained by means of screws or bolts with suitable lock washers. Brass or copper lugs of proper size shall be used for all ground connections. The lugs shall be properly soldered to the ends of cables.

164. All cables shall be continuous from connection to connection. The splicing of cables will not be permitted. All cables shall be provided with suitable lugs or terminals wherever practicable. Where the use of terminals is not practicable, the ends of cables shall be tightly twisted, formed into a solid loop of proper size for the screw connection, and the loop thoroughly soldered.

165. *Extra fuses*.—Two complete sets of extra fuses shall be furnished with each truck.

166. Apparatus intentionally "grounded" in itself shall be so made that for inspection or test the ground can be opened without dismantling the apparatus.

167. *Connectors*.—All connectors shall be so made that when disconnected the section which is alive will have all live parts recessed one-sixteenth or more below the end of the shell connector.

168. *Protection against accidental short circuits*.—All connecting posts on fuse and junction blocks, or on instruments, generators, or switches, which must necessarily have exposed live parts, shall be so constructed, recessed, or installed that an accidental short circuit can not be effected with screw drivers, pliers, wrenches, or other tools used while making minor repairs or adjustments.

169. Where live parts might be liable to accidental short circuits to adjacent metal, they must be provided with suitable insulating caps or bushings, or surrounded with a suitable insulating barrier; or the adjacent bare metal liable to be accidentally connected to them through repair tools should be covered with insulating material.

170. *Protective devices*.—The current to all circuits shall be passed through protective devices.

171. Protective devices shall be made on the battery side of switches and junction boxes.

172. Fuses must be of the inclosed type, constructed so that inspection will show whether or not they have been melted.

173. Fuses must be marked with their rating.

174. Standard 10-ampere fuses shall be $1\frac{1}{2}$ inches long over all, with ferrules one-fourth inch in diameter.

175. Fuses must be so constructed that with the surrounding atmosphere at a temperature of 75° F. (24° C.) they will carry indefinitely a current 10 per cent greater than that at which they are rated, and at a current 25 per cent greater than the rating open the circuit without reaching a temperature which will injure the fuse tube or terminals of the fuse block. With a current 50 per cent greater than the rating and at room temperature of 75° F. (24° C.) the fuses starting cold must blow within one minute.

176. The temperature of the exterior of the fuse inclosure must not rise more than 125° F. (70° C.) above that of the surrounding air when the fuse is carrying the current for which it is rated.

177. Fuse clips must be so made that fuses can not slip out accidentally. They must be fastened to a base so that they can not turn.

178. Clips should be so designed and protected that they can not be sprung together enough to take a permanent set interfering with the insertion of the fuse, or so that

they can be sprung apart far enough to give them a permanent set sufficient to prevent their holding the fuse tightly.

179. *Bulb sockets*.—Bulb sockets must be so made that the continuity of the return path for current is not impaired when the lamp is subjected to vibration.

180. In lamps, hinges shall not be relied on to carry current between the bulb socket and the battery. The connections must be either permanent or so spring-held that contact is maintained tight under vibration.

181. Bulb sockets and connector plugs shall be constructed in accordance with the latest recommendations of the Society of Automobile Engineers.

182. The instrument light socket shall be the single point type with two terminals for wires. One terminal will connect with source of current supply, and the other will connect with a wire leading to the one point grounded tail light socket, thus putting the instrument light and tail light in series.

183. *Fuse box*.—A four-circuit fuse box of proper design shall be installed in a readily accessible location, and provided with fuse clips and fuses as follows:

184. One 30-ampere fuse for main connection between battery and junction fuse block. This fuse shall be the standard National Electric Code, 30 ampere, 250 volt, indicating fuse, $1\frac{1}{4}$ inches long, and $\frac{1}{4}$ inch in diameter. One fuse clip from this fuse shall connect with the wire leading from negative terminal of storage battery, and the other fuse clip shall connect with one end of each of the other three fuses.

185. Three 10-ampere fuses for lighting and ignition circuits. These fuses and fuse clips for same shall be constructed as specified in paragraphs 172–178 inclusive, and paragraph 184. One of these fuses will connect with lighting switch, one with search-light switch, and the other with ignition switch.

186. The fuse box shall be of best make, and constructed of molded insulating material in both box and cover, or the box and cover may be of black enameled steel suitably lined with a proper insulating material. The wires shall all enter the fuse box from below, and be a snug fit in the opening in box. If steel boxes are used the holes in box where wires enter shall have suitable insulating bushings, and the fuse clips must be mounted on a heavy hardwood base, securely fastened to back of box by suitable brass screws. The heads of screws shall be deeply countersunk below the surface of the base.

187. *Extra fuses*.—One complete set of extra fuses will be provided and attached by means of suitable spring clips to the inside of fuse box cover.

188. *Fuse clips*.—The fuse clips for all fuses shall be constructed as required by paragraphs 177 and 178 of these specifications.

189. *Switches*.—The ignition switch shall be triple point switch of best make, with one point for battery ignition, one point for magneto ignition, and the other point for cutting out the high tension magneto by grounding the high tension coil.

190. The two lighting switches shall be the push type of flush switch, of best make, and mounted in a location readily reached from the driver's seat, and provided with a heavy brass two-gang switch plate, in dead black finish.

191. *Insulation requirements of electrical apparatus and wiring after installation on truck*.—All electrical apparatus and wiring on truck shall be capable after installation of withstanding for one minute an alternating potential of 500 volts, the test being applied between the conducting circuit and frame or "ground." In making the test the ground connection shall be removed at such points as will permit the test being applied to all parts of the circuit which in actual use will be subjected to the working potential.

192. *Exception*.—Batteries will not be subjected to any insulation test above their working potential.

193. *Temperature test of insulating materials of electrical apparatus*.—All insulating material used in connection with plugs, sockets, and similar devices of electrical apparatus shall be capable of withstanding for 30 minutes a temperature of 300° F.

194. *Battery*.—Furnish and install on the truck a 6-volt 120-ampere-hour battery of best make, designed for lighting and ignition purposes only. This battery shall have a rated capacity of 120 ampere-hours, based on the method of rating given below, and may be either the lead-acid type or the Edison alkali-nickel-steel type.

195. The proposal must state the guaranteed life of the battery when properly cared for in accordance with the S. A. E. standard instructions.

196. Complete information regarding the details of the construction of the battery must be given, together with the guaranteed efficiency—that is, the ratio of watts output to watts input must be given, based on charging the battery to a potential of 2.6 volts per cell and discharging to a potential of 1.8 volts per cell at a 5-ampere discharge rate, the temperature being 80° F. at the beginning of charge and at the beginning of discharge.

197. *Dimensions of batteries*.—The over-all width of the battery, measured from side to side of case, shall not exceed $7\frac{1}{4}$ inches.

198. The over-all length of the battery, measured from end to end of case, including handles, shall vary according to the capacity of the battery and its details of design. Handles shall, as standard, be placed at the ends of the battery. The space occupied by such handles and hold-down devices shall be in the direction of the length of the battery only and not in the direction of its width. The over-all height of the battery, measured from bottom of case to top of handles, shall not exceed $9\frac{1}{2}$ inches.

199. *Rating of battery.*—The battery shall be rated at the capacity in ampere-hours of the battery when discharged continuously at a 5-ampere rate to a final voltage of 1.8 per cell, the temperature of the battery beginning such discharge being 80° F.

200. *Hydrometer.*—Furnish with each battery a battery-hydrometer syringe of best make for measuring the specific gravity of the electrolyte. It must be so designed that the top or stem of hydrometer can not stick against the side of syringe when it is held in an approximately vertical position.

201. The hydrometer-syringe glass shall be so constructed as to hold the hydrometer in a proper position and shall be provided with rubber buffers in the ends to prevent the breaking of the hydrometer.

202. The lower end of syringe glass shall be provided with a suitable length of best quality rubber tubing.

203. The stem of hydrometer shall be marked in specific gravity, and also marked to indicate when battery is fully charged, when one-half charged, and when completely discharged.

204. *Battery jars.*—The battery jars, complete, including covers, vents, and terminal bushings, must be molded from best quality hard rubber compound, properly vulcanized. The jars shall be not less than one-eighth of an inch thick at all points and shall be provided with suitable supports for plates at bottom of jar, and a large capacity under plates for the accumulation of sludge without touching plates.

205. The rubber compound must have a high tensile strength and sufficient elongation to prevent excessive brittleness, and must not materially increase in brittleness with age.

206. The entire rubber jar must be capable of withstanding an alternating potential of not less than 25,000 volts for one minute without puncture.

207. *Installation of battery.*—The battery must be installed in a readily accessible location, which will facilitate adding water to, or the testing of the solution, and which will permit the easy removal of the battery. The battery compartment must be well ventilated and drained, must keep out water, oil, and dirt, and must not afford opportunity for anything to be laid on top of the battery. The battery must have free air space on all sides, must rest on cleats rather than on a solid bottom, and holding devices must grip the case or handle. A cover, cleat or bar pressing down on the cells or terminals must not be used.

208. The battery must be installed so that neither acid fumes nor overflow of water or electrolyte will cause serious leakage of current.

209. Battery hold-down bolts, if connected to handles or other metal parts at the level of the top of the jars, must be insulated at least one of their two ends.

210. *Cushion mounting.*—The battery shall also be provided with a suitable cushion mounting which will prevent it from being subjected to severe shock or vibration.

211. *Instructions for care of battery.*—Complete printed instructions for the proper care of battery shall be furnished. These instructions shall be in accordance with the latest recommendations of the Society of Automobile Engineers, together with such additional instructions as the manufacturer of battery may consider advisable.

212. These instructions shall be printed on heavy white cardboard of suitable quality, in large-sized type. This card shall be securely mounted under seat board, or in the most suitable location, and covered with two coats of best quality demar varnish.

213. *Transmission.*—The transmission shall be of the selective type and must have not less than four speeds forward and one reverse. It may be integral with the engine assembly forming a unit power plant, or it may be a separate unit, installed on the frame between the engine and differential. If the transmission is installed as a separate unit, two universal joints must be provided between the engine and transmission.

214. The high-speed gear shall be direct without gear reduction in the transmission.

215. The gears of transmission must be cut on suitable gear shapers or gear-generating machine, from forged steel blanks of alloy steel of the best quality for the purpose and properly heat treated and accurately adjusted to a quiet running fit under load. These gears must have sufficient width of face and strength to transmit the full power of the engine at all gear ratios, with a proper face of safety.

216. The splined driving shaft for sliding gears must be made of best quality alloy steel, properly heat treated.

217. It is desirable that the transmission shall be accessible from below the body for inspection, adjustment, or repair. The transmission shall be carried on the chassis frame or other part which is provided with a suitable spring suspension. Transmission gears constructed as an integral part of the rear axle, or in any other manner which does not provide proper spring suspension will not be acceptable.

218. *Differential.*—The differential shall consist of a forged steel, case, to which the large gear is attached by being bolted or riveted. In worm drive rear axles, this case shall also contain the necessary gears for producing the required differential action, and shall be provided with suitable steel roller or ball bearings of best make. The case shall be supported on its bearings independent of the drive shaft ends, which shall be properly fitted into the two ends of the case, and connect by means of suitable splines to the gears in differential case. The spline connection shall be made in accordance with S. A. E. standards.

219. If bevel driving gears are used, both gears shall be machine cut on suitable gear generators, from forged steel blanks of 3.25 to 3.75 per cent nickel and chromium steel of best quality, and properly heat treated.

220. It is preferred that the small bevel drive gear be forged integral with its shaft. This shaft shall be made of 3.25 to 3.75 per cent nickel-chromium steel, of best quality, properly heat treated, and provided with two sets of taper roller or ball bearings of best make, and provided with suitable means for the ready adjustment of the small bevel gear in relation to the large bevel gear and vice versa. If ball bearings are used they shall be provided with suitable means to take care of thrust loads.

221. The differential housing must be oil tight, and must have an inspection plate, giving ready access to the inside of housing. An oil filler plug must be provided at a proper height to act as an overflow in filling. If the oil filler plug is located in the inspection plate, the studs for holding the plate must be so arranged as to prevent the plate from being reversed. The differential complete must be readily removable after removing the full floating splined drive shafts.

222. *Rear axle.*—The trucks may be either internal gear drive, chain drive, worm-gear drive, or bevel-gear drive.

223. The design, material, and construction of the rear axle and final drive shall be in every respect in accordance with the best standard practice.

224. Provision must be made for the thorough lubrication of all bearings, with the minimum attention necessary, and means must be provided for the protection of all bearings against water, dust, or dirt. If the rear axle is bevel, gear drive or worm gear drive, suitable truss rods with turnbuckles must be installed, unless the axle is provided with a pressed steel axle housing which does not require truss rods.

225. *Internal gear drive.*—If the final drive is an internal gear, provision must be made for entirely inclosing the driving gears, and for retaining the lubricating oil or grease, and for preventing same from getting onto the brake bands.

226. Both the small spur driving pinion and the large internal gear shall be machine cut from drop forged steel blanks. The internal gear ring may be made of carbon steel of best quality for the purpose, but the small driving gear must be made of best quality chromium-vanadium steel, or other steel equally suitable. Both gears must have wide faces and must be so designed and constructed as to readily withstand the maximum power of the engine under the most severe service conditions, with a proper factor of safety.

227. All gears connected with this drive must be heat treated in the most suitable manner. The internal gear must be pressed onto turned flange on the wheel hub, and then firmly secured with suitable rivets.

228. The jack shafts shall be made of best chromium-nickel steel, must be properly splined at each end for connecting with driving gear and differential, and shall be provided at each end with steel roller bearings of best quality. These jack shafts shall be inclosed in steel tubing having flexible end connections in both the differential housing and the internal gear case, and these flexible connections shall be provided with suitable felt washers.

229. The complete differential with housing shall be firmly bolted with a proper number of bolts to the enlarged center of a drop forged steel axle having an I-beam section. This I-beam axle shall be forged from best quality carbon steel or equal, and properly heat treated. The wheel spindles shall be made of best quality chromium-vanadium steel, properly heat treated and not shrink into the ends of the axle.

230. *Front axle.*—The front axle shall be of I-beam section, drop forged from a single piece of carbon steel or alloy steel. The steering knuckles and the steering-knuckle levers shall be drop forged from alloy steel of best quality for the purpose and properly heat treated. The wheel spindles shall be provided with steel roller bearings of best quality, and provided with proper means of lubrication. The wheel hubs and bearings of both front and rear axles must be so designed as to prevent the

entrance of water, dust, or dirt, and also must prevent the leakage of grease from the hubs.

231. *Brakes.*—Two independent sets of double acting brakes shall be provided. The emergency brake must act directly on the rear wheels and be operated by a hand lever with catch for holding the brakes in any position. Service brakes may act directly on the rear wheels or on the drive shaft, and must be operated by a pedal. Brakes must be lined with an approved friction material and must be so constructed that they may be readily adjusted and securely locked in adjustment without removing the wheels or other parts.

232. Brake rods are to be sufficiently stiff to prevent whipping or rattling.

233. Brakes must be sufficiently powerful either to slip the wheels or stop the truck within a distance of not more than 20 feet with either the service brakes or the emergency brakes when the normally loaded truck is running on a level, hard, and dry macadam road at a speed of 14 miles per hour.

234. Both the service brakes and the emergency brakes must be readily adjustable for taking up wear, and must be provided with as large an amount of radiating surface as practicable. Provisions must also be made for holding the braking surfaces on brake bands or brake shoes concentric with the brake-drum surface. The brakes must be so designed as to release completely and not drag at any point when the brake lever or pedal is released. The brake drums must be exactly circular and bolted to the wheels with suitable bolts, and located in such a manner as to be concentric with the center of wheel. Provision must also be made for preventing an accumulation of oil or grease on the brakes or brake bands which would destroy the effectiveness of the brakes.

235. All brakes must be mounted in such a manner that the braking strains will be taken by parts which are strong enough to withstand these strains under the most severe braking conditions.

236. The rear-wheel brakes shall be equally effective either with or without load.

237. *Frame.*—The frame shall be constructed of heat-treated pressed steel or standard rolled sections. The frame and suspension must be so designed as to prevent cramping of any part, due to distortion of frame because of uneven road conditions.

238. It must have sufficient depth, thickness of material, and width of flange to withstand all strains which may be put on same under the most severe service conditions, with a liberal factor of safety.

239. The frame shall be reinforced at proper intervals with suitable cross members thoroughly fastened to the frame with hot rivets or fitted bolts riveted over. All holes in the frame shall be drilled, not punched. Suitable pigtail towing hooks shall be attached to the frame, two at the front and two at the rear. These towing hooks shall be bolted to the sides of frame.

240. A suitable towing hook shall also be installed in the center of the rear frame cross member, and provided with suitable spiral spring. This towing hook shall have spiral springs to resist both tension and compression, and must have a shank not less than 1 inch in diameter, and provided with a hook which is designed in such a manner as to prevent the draw-bar from pulling from the point of hook.

241. The frame shall be provided with two best quality, dressed oak sills, one bolted on top of each frame side member. These sills shall be the same width as the flange on frame, and shall be of proper depth, to give not less than 6 inches clearance between the rear tires and the side sill of body as shown on drawing No. 3-1346-B, Q. M. G. O., June, 1916. These sills shall be gained over all gusset plates or other irregularities on the frame, and shall be provided with not less than 10 half-inch saddle bolts, two angle plates with bolts as shown on drawing of body, and bolts of proper length for fastening body bolsters to sills. The sills shall be painted with three coats of paint of the composition given on drawing.

242. *Drive shaft.*—The propeller shaft connecting the transmission with the rear axle and differential must be of suitable size and strength to properly transmit the full power of the engine at all gear ratios under the most severe service conditions. It must also be of such design and must be supported in such a manner as to prevent whipping or excessive vibration at all reasonable coasting speeds. The slip joint shall be fitted with an S. A. E. standard or similar spline connection.

243. Two universal joints must be provided between the transmission and differential. These universal joints must be so designed as to contain a proper quantity of lubricating grease and must each be provided with a tight leather boot made of best quality first cut leather.

244. These leather boots must be provided irrespective of the type of universal joint which is employed, and must be provided at each end of boot with suitable screw clamps.

245. *Clutch.*—The clutch may be either of leather faced cone type, multiple disk, or single disk type. The multiple disk type of clutch is preferred. It must have

sufficient strength to transmit full power of the engine at all speeds, must be easily accessible for repair or replacement of parts, and must be provided with a suitable arrangement for permitting easy engagement, which will not require frequent adjustment or renewal of leather or friction material. The clutch must be capable of withstanding the severe service required when hauling trailers carrying loads at least equal to the load carried on truck.

246. It is desirable that the clutch be readily adjustable or provided with a spring which will give uniform action of clutch during the wearing life of the friction material.

247. The clutch must be readily removable without disturbing the transmission, steering gear, motor, or other important parts, except in the case of a unit power plant, and must be provided with an efficient brake, in order to stop the spinning of clutch. The action of the clutch must not be affected by changes in atmospheric conditions, and the clutch must engage without grabbing at all engine speeds.

248. *Steering gear and wheel.*—The steering gear may be either the worm and wheel type or the screw and nut type, and means shall be provided for its thorough lubrication. Adjustments must be possible without removing the steering assembly from the frame.

249. A notched grip steering wheel of best quality shall be provided, having an outside diameter of not less than 20 inches. The steering post must be rigidly mounted to prevent vibration, and must be provided with both spark advance and throttle levers. The lever sector for spark lever must be plainly marked "START" and "RUN," for the most suitable starting and running positions of the spark advance lever.

250. The gear reduction and length of levers on steering gear must be such as to give easy turning action with the fully loaded truck, but the gear reduction must not be so low as to prevent sufficiently quick turning of the wheels in steering.

251. The steering cross rod must be located back of the front axle in order that the front axle may protect it against damage from obstructions, and it must be above the bottom edge of the axle at all points.

252. All steering connecting rod joints shall be hardened steel sockets, held by springs in close contact with hardened steel balls. The steering cross rod joints may be of the ball and socket or clevis type.

253. *Wheels.*—The wheels shall be of suitable size for the use of 36 inches S. A. E. demountable solid tires, and shall be either best quality wooden cast-steel wheels, of proper design, strength, and construction, and made in accordance with the best standard practice.

254. If the wheels are made of wood, the spokes must be made of best quality selected, straight-grain hickory, and thoroughly seasoned, and the wheels provided with S. A. E. felloe bands. The felloes shall be constructed of best quality ash, thoroughly seasoned, and free from defects. The wheel shall be of suitable size and design for the use of 36 by 5 inches single, solid, demountable rubber tires, on front wheels, and 36 by 5 inches dual, solid, demountable tires on rear wheels. All wheels shall be of proper strength to resist the vertical and lateral loads in the most severe service, and with the maximum loads and speeds for which the truck was constructed.

255. The ends of all spokes must rest on the inside of the felloe.

256. The hubs of wheels shall be made of best quality cast, or forged steel, free from blow holes which will impair the strength or finish of finished hub, and must be provided with best quality hardened and ground roller bearings of proper size.

257. Complete detail and assembly drawings, showing the construction, material, and dimensions of all parts of the wheels, must be submitted.

258. *Hub odometer.*—A hub odometer of best make, and of suitable design and construction for most satisfactory use on motor trucks, shall be provided and installed on one of the front wheels. The odometer shall have not less than five figures in the dial, and provision shall be made to prevent leakage of grease into mechanism.

259. *Tires.*—On two-wheel drive trucks the tires shall be 36 by 5 inches dual tires on rear wheels, and 36 by 5 inches single tires on front wheels, both front and rear tires demountable.

260. On four-wheel drive trucks the tires shall be 36 by 7 inches, single, demountable, both front and rear.

261. All tires shall be best quality solid rubber tires on hard-rubber base with S. A. E. steel rims. A sample section of the rubber tire and rim must be submitted with each proposal.

262. The following data must be submitted in reference to the tires which it is proposed to furnish:

- (a) Diameter and width of front tires.
- (b) Diameter and width of rear tires and whether single or dual.
- (c) Total area of rubber, both soft and hard, in tire section.

- (d) Area of rubber above top of channel.
- (e) Specific gravity of soft rubber.
- (f) Tensile strength in pounds per square inch at given temperature.
- (g) Stretch and set of 2-inch lengths of rubber in small strips, at given temperature.
- (h) Per cent by volume of fine Para rubbers in tires.
- (i) Per cent by volume of other rubbers in tires.
- (j) Guaranteed mileage of tires if mileage is run in one year.
- (k) Guaranteed mileage of tires if mileage is run in two years.
- (l) Trade name of tire.
- (m) Name of manufacturer of tire.

263. All tires furnished with the entire lot of trucks must be the same type and size and must be made by the same tire manufacturer, unless the tires of other manufacturers will fit the same demountable rim.

264. *Gasoline tank*.—A suitable drawn-steel gasoline tank shall be provided having a capacity of not less than 30 gallons. This tank shall be thoroughly tinned both inside and outside.

265. A metal partition shall be installed in the inside of tank of such height as to give a capacity of 6 gallons on each side of the partition. Suitable baffle plates shall be installed on each side of partition in order to prevent excessive splashing. The connection from tank to carburetor shall be made from the bottom of each compartment, through a three-way cock, thus giving a positive reserve supply of 6 gallons.

266. If a vacuum system or a pressure system is provided, the three-way cock may be installed at the top of tank with the supply pipes extending from same to the bottom of each compartment in tank.

267. A suitable gasoline strainer with drain cock shall be installed in a readily accessible location, and in the gasoline line between the tank and carburetor, or between the gasoline tank and vacuum feed tank. The gasoline pipe line shall consist of brass or copper tubing, not smaller than five-sixteenths of an inch outside diameter, and arranged so as to completely drain through either the tank, carburetor, or strainer.

268. Suitable means must be provided for draining the gasoline from a flooding carburetor onto the ground without permitting any gasoline to get into the engine pan or to accumulate on any part of the chassis.

269. The gasoline tank must be installed high enough to permit the gasoline to flow to the carburetor when the truck is climbing the maximum grade which it is capable of negotiating under the most favorable road conditions, and with the minimum amount of gasoline in the tank. If necessary, a pressure feed system may be employed.

270. *Springs*.—The chassis spring suspension must be of such design and construction as to relieve the body and chassis above springs of excessive vibration when the vehicle is traveling empty or partially loaded over rough surfaces at maximum speed.

271. Springs must be made of alloy steel properly heat treated, not lower in quality than required to develop the following physical properties:

Minimum elastic limit, pounds per square inch.....	170,000
Tensile strength, pounds per square inch.....	210,000
Elongation, per cent.....	6
Brinnell hardness.....	390-410
Schlerescope.....	53-56

272. Spring eyes must be provided with phosphor-bronze or soft-steel bushings pressed in and reamed in position to the S. A. E. limits of tolerance for such bushings. Bushings must have suitable lubricating channels and conform to S. A. E. standard of wall thickness. If phosphor bronze is used, it must be equal to S. A. E. specification No. 26.

273. Spring eyebolts must be hardened and not smaller in diameter than the size mentioned in the table in paragraph 283. Eyebolts must be securely anchored to prevent turning in the spring shackle and be provided with suitable means for lubrication.

274. Spring shackle bolts or cross bars must be properly hardened on bearing surface and be so designed as to provide at least equal projected bearing area to that provided by the eyebolts. Where shackle bolts are used in connection with bar shackles, they must be provided with suitable means of lubrication and be securely anchored to prevent turning in the shackle.

275. *Spring shackles*, must be made of a material equal to S. A. E. specification No. 12-35 for steel castings, and heat treated. They must have a center to center distance not less than the spring width and may be of two types—Bar shackles formed of two plates with a connecting bar formed integral with them, or yoke shackles, having one end open and the other end connected and adapted to receive the shackle pin or bar.

Where yoke shackles are used they must be bushed at the shackle pin or bar end with a material equal to S. A. E. specification No. 26 or soft steel, bushing to have $\frac{1}{8}$ -inch walls; lubricating channels, and suitable means of lubrication. Yoke shackles must be so designed as to provide projected bearing area at the closed end at least equal to that of the spring eyes. Rear spring shackles must be in tension.

276. *Shackle hangers*, when used in connection with bar shackles, must be bushed with a material equal to S. A. E. specification No. 26 or soft steel, said bushings to have $\frac{1}{8}$ -inch walls and be provided with suitable lubricating channels and means of lubrication.

277. *Shackle position*.—In the design of springs and the assembly of same on chassis, the spring shackles must stand in approximately a vertical position when the spring is under full load, except on chain-driven vehicles where shackles must stand at an angle sufficient to allow chain adjustment without cramping the spring main plates.

278. *Spring leaves* must be held against longitudinal movement by means of an alloy steel center bolt of proper size, by an indentation in the center of each leaf, or by a combination of those methods. If center bolts are used, the heads shall conform to S. A. E. standard, and be provided with snug fitting S. A. E. standard center bolt nuts and means provided for locking the nuts in position. Springs with shrunk-on center bands will not be acceptable because of the difficulty of making repairs in field service. Center fastening must be shown in detail on the drawing mentioned in par. 293.

279. *Spring clips* must be made of alloy steel, properly heat treated, of a suitable quality to develop physical properties equal to the following:

Elastic limit, 100,000 pounds per square inch.

Tensile strength, 130,000 pounds per square inch.

Elongation in 2 inches, 20 per cent.

Reduction of area, 60 per cent.

Brinnell hardness, 295.

Schleroscope, 35.

These spring clips must not be smaller in diameter than the size mentioned in the table in par. 287.

Spring clips must have S. A. E. standard threads and be provided with snug-fitting nuts of a length equal to one and one-half times the diameter of the spring clips, as mentioned in S. A. E. standards.

The chemical specifications, physical properties and heat treatment must be given.

Nuts may be of carbon steel.

280. *Metal spring chairs*, must be provided between springs and spring seats. Chairs must be so designed as to be held by the spring clips against longitudinal movement, and have one face shaped to conform to the shape of the spring when the spring is free or without load.

The center of the chair must be recessed to properly receive the center fastening of the spring. Spring chairs may be omitted where the spring seat is shaped to conform to the shape of the spring when the spring is free.

281. *Pressure blocks*, of a material equal to S. A. E. specification No. 12-35 for steel castings, heat treated, must be provided between the spring clips and the spring, and must be grooved and conform to the shape of the spring clips where in contact with the clips.

The face of pressure blocks must conform to the shape of the spring when the spring is free.

282. *Permanent stops*.—All vehicles must be provided with permanent stops which will prevent the springs from being deflected to a point at which the stress will be greater than 75 per cent of the elastic limit of the material from which the springs are made. It is desirable that yielding bumpers also should be provided.

283. The following table gives the permissible width of springs, minimum diameter of eye bolts, and minimum diameter of spring clips for both front and rear springs.

Location of spring.	Approximate load per spring.	Width.	Eye diameter.	Spring clip alloy steel, diameter.
	<i>Pounds.</i>	<i>Inches.</i>	<i>Inches.</i>	<i>Inches.</i>
Front.....	700 to 1,050	2 $\frac{1}{2}$	$\frac{3}{4}$	$\frac{3}{4}$
	1,000 to 1,250	2 $\frac{1}{2}$		
	1,200 to 1,550	3		
	1,500 to 1,850	3		
Rear.....	1,250 to 1,500	2 $\frac{1}{2}$	1	$\frac{3}{4}$
	1,600 to 1,900	2 $\frac{1}{2}$		
	1,900 to 2,500	3		
	2,500 to 3,500	3		
	3,880 to 4,500	3 $\frac{1}{2}$		

In case the rear springs take either drive, torque, or drive and torque, then one-eighth inch must be added to the above clip diameters, and one-fourth inch to spring eye diameters. Where rear springs are underslung, add one-eighth inch to clip diameters.

284. The use of carbon-steel spring clips will not be permitted.

285. *Rebound clip*.—A suitable number of rebound clips must be provided on each spring and attached in such manner as to retain their proper position, and if riveted in position must be provided with a spacer $\frac{1}{4}$ inch longer than the spring width between the open ends of the clips. The distance between the spacer and the face of the nearest spring leaf must not be greater than $\frac{3}{8}$ inch.

286. *Lubrication*.—The lubrication of all spring connections must be through grease or oil cups, which must be so located as to be readily accessible and of ample capacity and so designed as to prevent any part of the cup shaking loose through vibration. When cups are not formed integral with the spring connections, they must be screwed in position with standard $\frac{1}{4}$ -inch taper pipe thread; at least four threads of shank must be engaged.

287. *Springs*.—Must be provided with suitable means for retaining the leaves in proper alignment with each other. The method used must be shown in detail in the drawing mentioned in paragraph 293.

288. A drawing must be furnished showing in detail the method of fastening leaves at spring center, the number, location, and method of fastening rebound clips and the method of retaining the leaves in proper alignment with each other. This drawing must also bear in tabulated form the following information:

k. Chemical specifications of steel from which springs are made.

Heat treatment.

Physical properties after heat treatment including Brinall and Scleroscope test:

- (a) Type of spring.
- (b) Width of spring, nominal.
- (c) Width of spring at eyes.
- (d) Length of spring under load, front end (center bolt to bearing point or eyes).
- (e) Length of spring under load, rear end (center bolt to bearing point or eyes).
- (f) Height of spring under load, measuring from short leaf to line drawn through center of bearing point or eyes.
- (g) Flexibility in pounds per inch of deflection.
- (h) Length of short leaf.
- (i) Thickness and number of leaves and of individual leaves, counting from main leaf.
- (j) Inside diameter of bushing.
- (k) Outside diameter of bushing.
- (l) Diameter of center bolt.
- (m) Diameter of center bolt head.
- (n) Height of center bolt head.

289. Scale formed on leaves during heat treatment shall be removed as thoroughly as possible without breaking surface skin.

290. All springs must be tested in accordance with the recommendations of the S. A. E. and must fully meet with the requirements of said test as to variations in height, flexibility and permanent deflection under conditions of test.

291. Driving power may be transmitted from axle to frame through the medium of radius rods, or through the chassis springs.

292. If power or torque is transmitted through the chassis springs, the design must be such that the vehicle will not be rendered inoperative through breakage of the main or driving leaf of the spring and the axle attachment must be such as to prevent relative longitudinal movement under the extreme pressure imposed at the maximum draw-bar pull.

293. *Bodies*.—Bodies are not to be furnished unless specifically called for. The construction of chassis shall be such as to permit the proper installation of body on same having inside dimensions of 6 feet 6 inches wide, 12 feet long, and 2 feet high, with the floor of body at a height of not over 45 inches above the ground when the truck is loaded. The length of frame back of driver's seat shall be 12 feet 4 inches.

294. In fastening the body to chassis neither the frame nor the frame members shall be drilled. The body shall be fastened to the frame by means of suitable bolts, as shown on drawing No. 3-1346B, Quartermaster General's Office, June, 1916.

295. *Painting*.—The entire chassis shall be first thoroughly cleaned of all dirt, grease, or oil, and covered with coat of best-quality, rust-resisting paint. It shall then be painted with three coats of best-quality lead and oil, olive-drab color, of the following composition: 6 pounds white lead ground in linseed oil, 1 pound raw umber, 1 pint turpentine, $\frac{1}{2}$ pint Japan drier, 1 quart linseed oil.

296. Each coat must be permitted to become thoroughly dry before applying the next coat.

297. *Data with proposals.*—The following information must be furnished with each proposal, and also all other data called for in those specifications. Illustrations, catalogues, and specifications showing the construction of the truck bid upon should also be submitted. Failure to supply this data may be considered to render the proposal informal and result in its rejection.

- (1) Name of manufacturer of motor.
- (2) Bore, inches; stroke, inches.
- (3) Number of piston rings.
- (4) Type of piston rings.
- (5) Crank-shaft bearings: Number, type, size of each.
- (6) Make and thickness of antifriction metal used.
- (7) Are main bearings and connecting-rod bearings bronze backed?
- (8) Diameter of crank shaft, inches.
- (9) Diameter of crank pin.
- (10) Speed of motor corresponding to truck speed of 12 miles per hour on high gear, revolutions per minute.
- (11) Manufacturer and type of governor.
- (12) Manufacturer and type of carburetor.
- (13) Type of water circulating pump.
- (14) Method of lubrication of motor.
- (15) Manufacturer and type of magneto.
- (16) Manufacturer and type of clutch.
- (17) Manufacturer and type of transmission.
- (18) Gear reduction, crank shaft to rear wheels: First speed (low gear), second speed, third speed, fourth speed, reverse.
- (19) Type of drive, gear reduction of transmission only, jackshaft only if chain drive, final drive.
- (20) Manufacturer and type of drive axle or jackshaft.
- (21) Number of sprocket teeth on jackshaft sprocket, and on wheel sprocket.
- (22) Manufacturer of tires; size and type of tires.
- (23) Maximum depth of frame inches.
- (24) Thickness of frame stock inches.
- (25) Kind of steel in frame.
- (26) Manufacturer and type of steering gear.
- (27) Diameter of steering wheel.
- (28) Type of brakes.
- (29) Manufacturer and brand of brake lining used.
- (30) Area of braking surface, emergency brakes.
- (31) Area of braking surface, service brakes.
- (32) Distance required to stop normally loaded truck from speed of 12 miles per hour, on hard level macadam road.
- (33) Diameter of front wheels.
- (34) Diameter of rear wheels.
- (35) Shipping weight of chassis including all accessories and spare parts as specified herein, pounds.
- (36) Weight of chassis only, on front wheels.
- (37) Weight of chassis only, on rear wheels.
- (38) Weight of chassis loaded on front wheels.
- (39) Weight of chassis loaded on rear wheels.
- (40) Type and make of radiator.
- (41) Is radiator spring suspended?
- (42) Water capacity of cooling system, gallons.
- (43) Frontal area of radiator, square inches.
- (44) Depth of radiator core, inches.
- (45) Area of radiator cooling surface, square inches.
- (46) Quantity of water delivered by pump, with engine speeds of 500 and 1,000 revolutions per minute.
- (47) Power required to drive fan.
- (48) Efficiency of power transmission from engine to rear wheels on each of gear ratios, and with full power of engines.
- (49) Does truck steer with front wheels, rear wheels, or both front and rear wheels?
- (50) Type of front springs.
- (51) Type of rear springs.
- (52) Make and type of bearings in front wheels.

- (53) Make and type of bearings in rear wheels.
- (54) Minimum diameter of turning circle.
- (55) Speed of truck at each gear ratio with 1,000 feet of piston speed per minute.
- (56) Is engine, clutch, and transmission in unit power plant, or is transmission in separate unit.
- (57) Make and type of front wheels.
- (58) Make and type of rear wheels.
- (59) Make and type of front axle.
- (60) Make and type of rear axle.
- (61) Total length of chassis over all.
- (62) Total width of chassis over all.
- (63) Wheel base, inches.
- (64) Tread, front wheels, center to center of felloe band.
- (65) Tread, rear wheels, center to center of felloe band.
- (66) Minimum ground clearance, center of rear axle.
- (67) Minimum ground clearance, center of front axle.
- (68) Minimum ground clearance of any part of front axle.
- (69) Minimum ground clearance of any part of rear axle.
- (70) Minimum ground clearance at drive sprockets.
- (71) Minimum ground clearance at brake drums.
- (72) Minimum ground clearance at fly wheel.
- (73) Minimum ground clearance between axles.
- (74) The speed power curve and speed torque curve of engine with wide-open throttle.
The speed power curve must be extended to the drooping point, if practicable, and the engine vibration points noted on the curve. The maximum speed of engine without excessive vibration must also be indicated on the curve.
- (75) Weight of piston complete with pin and rings.
- (76) Weight of connecting rod complete with bushings, bearings, bolts, and set screws.
- (77) Gasoline consumption in pints per H. P. H. on block test, at one-fourth load, one-half load, three-fourths load, and full rated load at 1,000 feet of piston speed per minute and a water jacket temperature of 180° F. at outlet of water manifold. Also gasoline consumption in pints per hour with engines running at 1,000 feet of piston speed per minute and no load and with water jacket temperature the same as above.
- (78) Gasoline consumption in pints per H. P. H. on block test with wide-open throttle and maximum torque at 250 feet, 500 feet, 750 feet, and 1,000 feet of piston speed per minute.
- (79) The gasoline consumption data above required must be taken with one setting of the carburetor. The carburetor setting must not be changed when testing the engine at different speeds or loads.
- (80) The mechanical horsepower required to drive the engine at a speed of 1,000 feet of piston speed per minute with carburetor in place and with throttle wide open.
- (81) Clearance of volume in per cent of piston displacement.
- (82) Number of cylinders in casting.
- (83) Are cylinder heads removable?
- (84) Location of valves, both in head, one in head, and one in ell, two in ell, or tee.
- (85) The net weight of engine complete with flywheel, clutch, carburetor, magneto, pumps, generator, fan, and manifolds.
- (86) Complete valve timing data.
- (87) Gasoline consumption of fully loaded truck in units per gallon on high gear, when running over smooth macadam roads.

298. *Equipment.*—Diaphragm horn: Furnish and install in a location readily reached from the driver's seat a diaphragm horn of best make. This horn shall be installed in a rigid manner, with proper through bolts, nuts, and lock washers.

Suitable "pig-tail" towing hooks fastened to corners of frame at front and rear.

A suitable swivel towing hook at rear, having a spring take-up of proper design which will resist both tension and compression.

Tire chains of best make, complete on all four wheels, with two dozen extra cross chains for same. The drivewheels may be equipped with individual cross chains which fasten to the wheels.

One pair 6-inch side-cutting pliers of best make.

One pair 7-inch combination gas pliers of best make.

One jack of best quality, and of suitable height of lift and strength for the truck.

One set of socket wrenches to fit all nuts on truck.

Four spark plugs.

Two exhaust valves.

One intake valve.
 Two exhaust valve springs.
 One intake valve spring.
 Two fan belts.
 One set extra hose connection for radiator.
 One extra drain cock for radiator.
 Two extra grease cups of each size of trucks.
 One 5-pound can soft cup grease.
 One gallon engine cylinder oil in sealed can.
 One-half gallon gear oil in sealed can.
 One quart kerosene in sealed can.
 Ten feet No. 10 B. & S. gauge primary copper cable, oil and waterproof.
 One assortment of lock washers, S. A. E. standard. Furnish 6 washers of each size provided on truck.
 One carburetor float.
 One carburetor needle valve.
 One condenser for magneto.
 One condenser for battery timer.
 Two extra service brake shoes, complete, with adjusting screws.
 Two emergency brake shoes, complete, with adjusting screws.
 One 6-inch bastard file.
 One 8-inch flat mill file.
 One box assorted cotter pins.
 One rubber or canvas pail, 2½ gallons.
 One small clamp vise of best quality, with 3-inch jaw.
 One cold chisel, ¾-inch long.
 One box grinding compound; must contain two grades.
 One valve lifting tool.
 One valve grinding tool.
 One spring for placing under valves when grinding.
 One pinch bar, 6-pound, 42 inches long.
 One best quality grease gun.
 One funnel, 8-inch, heavy, with strainer.
 Four gaskets for intake valve gauge, and valve cap, if used.
 Four gaskets for exhaust valve cage and cap, if used.
 One cylinder cover gasket, if used.
 Eight spark plug gaskets.
 One box assorted nuts, plain box, case hardened. Assortment must include not less than two nuts of each size on truck.
 One box nuts, castellated, case hardened. Assortment must include not less than two nuts of each size on truck.
 One-half dozen lamp wicks of size used in lamps on truck.
 Two leather boots for universal joints with suitable clamps.
 Two leather boots for joints on drag link with laces.
 One roll heavy gasket paper.
 One fire extinguisher, 1-quart capacity, of best make, with bracket support. Mount in vertical position.
 1 shovel short handle, square point. D handle, socket strap, best quality crucible steel.
 1 ax, single bit. 4-pound, with hickory handle, all of best quality.
 1 lantern, best quality, with No. 2 burner, guard and suitable globe lift. Must not blow out in the strongest wind.
 1 tow chain, 20 feet long. ⅝-inch links, with ring in one end and hook in the other end.
 150 feet manila rope. ⅝-inch diameter.
 1 complete set of all special tools used in the repair or adjustment of the truck.
 Steel tool box, with lock, to hold all tools tire chains and all other tools.
 Instruction books, oiling diagrams with instructions for a complete understanding of the care and operation of the truck.

299. *Tests.*—Trucks will be inspected and tested at the factory under the direction of a representative of the Quartermaster Corps and notification shall be sent to the Quartermaster General of the Army when the machines are ready for such inspection. Trucks must be built to stand any reasonable test that the Government may require in its military service. Tests will be made with the truck under loads as specified, and all labor and materials necessary for the tests will be furnished by the contractor.

HENRY G. SHARPE,
Brigadier General, Quartermaster Corps,
Acting Quartermaster General.

Inclosure No. 6.]

FEBRUARY 3, 1916.

MEMORANDUM FOR THE QUARTERMASTER GENERAL.

Subject: Assembly of motor trucks.

1. In compliance with instructions from Col. Baker, the following memorandum is submitted in reference to the advisability of purchasing standard truck parts and assemblies from different manufacturers, and assembling same to construct a standard motor truck which will be suitable for military use.

2. It is, of course, extremely desirable that the various parts of motor trucks for military use be made distinctly standard, in order that the various units of which the truck is composed will be absolutely interchangeable. In other words, the truck should be so designed and constructed that the engine in any truck may be replaced by the engine from any other truck, irrespective of the difference in the design, size, or manufacture of the engine. The same flexibility and interchangeability should apply to every other unit of which the truck is composed, such as transmission, front axle complete, rear axle complete, radiator, wheels, steering gear, frame or body.

3. Under the present conditions it would be practically impossible to induce the different manufacturers of trucks to so design and construct their vehicles that the unit parts of any one make of truck can be replaced by the units made by any other manufacturer of completed trucks. This condition is due to the fact that the various engineers can not agree on a standard basis of design and construction, each engineer claiming advantages for his particular design over the design of other engineers. There are also commercial reasons, in that some designs can be constructed more cheaply and consequently sold cheaper than others, although they may not be as suitable as the more expensive designs, and each manufacturer is also careful to so construct his truck that all repair parts must be purchased from him, thus conserving the profit which accrues from the sale of parts, which is an important part of the business, and also to prevent inferior parts from being furnished by other manufacturers.

4. The reasons of the manufacturer for so designing his truck that spare parts or unit assemblies can not be furnished by other manufacturers are sufficient to make it very improbable that they will ever get together on a common design for a standard truck with interchangeable parts, or unit assemblies, unless some outside influence is brought to bear on them.

5. The Society of Automobile Engineers is doing very valuable work in the standardization of material specifications, tests of materials, and also the size and design of minor parts, but they will hardly be able to standardize unit assemblies, because the society is composed principally of engineers who are associated with the various manufacturers, and they control the recommendations of the society.

6. The various manufacturers of parts and unit assemblies for trucks and automobiles who do not make the complete vehicle have not been able to agree on a standard basis for design or construction, to enable their parts or assemblies to be interchangeable, so that the manufacturers of strictly assembled trucks whose vehicles are constructed entirely from parts made by other manufacturers are not able to construct a standard truck with interchangeable parts or unit assemblies.

7. It is my opinion that all of the manufacturers of parts and unit assemblies, such as engines, transmissions, axles, etc., will be quite willing to make slight modifications in the design or construction of their product, which would enable the parts or units of their manufacture to be used in a standard truck which is designed and assembled by the Government. In this way the Government could accomplish a result which the manufacturers themselves can not produce, and it would result in a saving in first cost of trucks of not less than 25 to 30 per cent. The most important advantage of such an arrangement, however, would be the ready replacement and complete interchangeability of parts and unit assemblies, and the very large decrease in the number of parts and assemblies necessary to be kept on hand for replacements in field service. Another very important advantage would be that the Government would obtain real competition and very low prices in the purchase of all parts, supplies, and assemblies, as the same articles could be furnished by any manufacturer. In the purchase of all material, supplies, parts, unit assemblies and accessories, very rigid specifications could be formulated which would require the delivery of articles and material of the highest standard of design, composition, and construction.

8. The establishment of a shop for the assembly of new motor trucks and the overhauling and repair of old or disabled trucks would afford an excellent opportunity for the thorough training of sergeant chauffeurs. It would also permit of the overhauling

and repair of the various parts of trucks at a very low cost, and materially decrease the maintenance expense, and result in more satisfactory operation.

9. In the assembly of trucks, yearly contracts should be entered into for the furnishing of all parts, unit assemblies, and accessories required for the total production during that year, and the trucks produced during that year should be given a model designation. The trucks produced in each of the succeeding years should have different model designations, which would indicate the use of assemblies and accessories of a different manufacture, but all unit assemblies of any one series should be made readily interchangeable with each other, and the unit assemblies of any one series of year's production should also be made interchangeable with the units of any other series, irrespective of the difference in design of the unit assemblies.

10. It is recommended that two standard designs of motor trucks be prepared. One design should be a 1½-ton truck with two-wheel drive, and the other should be a 1½-ton truck with four-wheel drive, but the parts made interchangeable on both types of truck.

(Signed) WM. M. BRITTON,
Electrical and Mechanical Engineer, Quartermaster Corps.

[Inclosure No. 7.]

WAR DEPARTMENT,
OFFICE OF QUARTERMASTER GENERAL OF THE ARMY,
Washington, June 21, 1917.

From: The Quartermaster General.

To: Mr. Coker F. Clarkson, General Manager Society of Automotive Engineers, 29 West Thirty-ninth Street, New York City.

Subject: Standardization of military motor trucks.

1. Referring to the excellent work of standardization of parts and assemblies of motor trucks for military service which is being conducted by the Society of Automotive Engineers, it is requested that because of the extreme value of this standardization work from a military standpoint, you make every effort to extend this standardization to every unit assembly of which the trucks are constructed.

2. It is desired that your society standardize the design and fastenings of engine, clutch, transmission, rear axle, front axle, radiator, hood, springs, frame, dash, steering gear, and wheels. It is desired that efforts be first made to make the above units entirely interchangeable in all fastenings and connections and to further standardize the individual parts of all units in order to make those parts completely interchangeable in the assemblies made by different manufacturers.

3. It is considered by this department that the work above referred to is of the utmost military importance, and the early conclusion of all of this work will have an inestimably advantageous effect on the prosecution of the present war. It is therefore requested that this work be completed at the earliest practicable date.

4. The excellent work which your society has done and is continuing to do is fully appreciated by this department and there is every reason to believe that its work will be of increasing importance.

Respectfully,

HENRY G. SHARPE,
Quartermaster General, United States Army.
By W. A. BERTSCH,
Lieutenant Colonel, Quartermaster Corps.

[Indorsement No. 8.]

WASHINGTON, D. C., *July 14, 1917.*

MEMORANDUM FOR MAJ. C. B. DRAKE.

Subject: Policy regarding purchase of motor trucks.

1. In accordance with your suggestion, made at a conference held yesterday with you and Col. Bertsch, the undersigned committee has carefully revised the situation regarding the purchase of motor trucks for military use. One of the subjects under consideration at the conference was a letter under date of July 12 received by the Quartermaster General from Mr. F. A. Scott, chairman of the general munitions board of the Council of National Defense. A copy of that letter is attached hereto.

2. Commenting specifically on Chairman Scott's remarks, we would say that it is the understanding of this committee, based on reliable information, that the failure of the allies to place orders with certain American truck manufacturers has not been

due to the withholding of award of contracts by the Quartermaster General. We believe, furthermore, that it has been the fixed policy of the Quartermaster General's Office to release for immediate purchase by the allies all American trucks needed by them.

3. It is obvious that in the time that has intervened since the opening of bids, on June 10 strong feeling has been apparent among American truck manufacturers that the Quartermaster General's Office has not been sufficiently diligent in making forehanded and comprehensive arrangements to insure a sufficient supply of trucks and that inadequate consideration has been given by the Quartermaster General's Office to the problems which confront the truck manufacturers of insuring the proper flow of raw material to their factories and of the difficulties of holding their organizations intact.

4. It is not necessary to state that the Quartermaster General's Office has not been derelict, as mentioned above. Conditions over which he has no control whatever have prevented the Quartermaster General from deciding the proper awards to make for trucks prior to this time. It is evident to the committee, however, that it is necessary to make substantial awards at once. These will serve the double purpose of guaranteeing the delivery of such a number of trucks as will be required for use in the near future and of stabilizing the industry, but the committee is distinctly of the opinion that to order more than the number required for immediate needs will defeat the completion of important work, which will be explained later.

5. Several factors have an important bearing on the ultimate success of the motor transport service. The first requirement for such success is that the different designs and makes of trucks in use shall be confined to the fewest practicable number. Another requirement is that the fewest possible changes in construction details of the trucks be allowed, once they have been placed in foreign service in large quantities. If it were possible to have all the trucks of a given size of one design, the ideal condition would be fulfilled.

6. The concentration on one model considerably facilitates the instruction of drivers and repair men and insures better handling and maintenance of the unit. It also reduces the number of repair parts necessary to keep on hand to a minimum, thus markedly conserving storage and transportation facilities.

7. Inasmuch as it is necessary to make provision for motor transportation facilities abroad before it will be possible to bring about such standardized condition, it is evident that some compromise arrangement must be made. This compromise arrangement would consist in providing modified commercial trucks that are immediately obtainable, in the smallest numbers that will serve the needs of the Army safely up to the time standardized trucks shall be available. It is believed that a sufficient number to satisfy this condition can be obtained from not over four companies.

8. Your attention is invited to the work which has been progressing during the past two years, in which the Quartermaster General's office has been actively proceeding with the Society of Automotive Engineers. The object of all this work has been to obtain for the Army the most completely standardized truck possible to evolve, with the least disturbance of existing industrial relations and plant equipments, and to obtain units embodying the combined experience and ability of the best truck and parts engineers in the country. From what is known of the proposed standardized trucks it can be stated definitely that they will be more suitable for military service than any commercial trucks which are produced at the present time, and that they will be distinctly better than any of the modified commercial types which various manufacturers have proposed to build in more strict compliance with the War Department specifications. In general, the unit assemblies to be employed are exceptionally rugged and will need considerably less attention and fewer replacements, thus conserving valuable material, skilled labor, and already restricted transportation facilities.

9. The rapidity of the progress of this standard work since the urgent needs of war have been upon us have been remarkable. Necessary details of design upon which it seemed but a short time ago impossible to obtain unanimity have become accomplished facts. A final result in the form of advanced designs for completely standardized military truck, producible in counterpart form by at least all assembly factories, is in sight. All that is needed to bring this work to an ultimate satisfactory conclusion is concrete and substantial evidence on the part of the Government as these trucks will actually be purchased in comparatively large numbers as soon as available. Up to the present time the work has been carried on as the purely voluntary action of truck manufacturers, parts makers and the Society of Automotive Engineers, who are anxious to meet the Government's needs. It has also been conducted in accordance with the Quartermaster General's letter of June 21, a copy of which is attached.

10. In view of the decided progress which has been made in this very urgent standardization, and of the action of the Quartermaster General in requestion that the work be done, it is to be inferred that the Government will purchase in large numbers, trucks constructed in accordance with the finally approved standards.

11. The importance of complete standardization of all parts of motor trucks is fully recognized by the Secretary of War, who, in an address made on June 26, urged upon the society the vital necessity of forwarding the military truck standards work to an early completion.

12. The complete standardization of aeroplanes and engines which is now being accomplished and which will, it is understood, be consummated within a short time, constitutes additional evidence of the War Department's acute appreciation of the immediate and vital importance of standardization.

13. From all of the evidence at hand it is clear that all details connected with the standardization and testing of motor trucks, and of getting them into quantity production, can be practically completed by January 1, 1918, provided the Government will lend moral and financial assistance without stint to the completion of this highly important work.

14. The committee, accordingly, recommends that the Secretary of War be urgently requested to make available the sum of \$175,000 for the specific purpose of completing the already advanced development of class A and class B standard military trucks. It is recommended that this fund be made disbursible by the Quartermaster General, for services of temporary consulting engineers, draftsmen, and other employees, for necessary materials and supplies, for the rent of adequate quarters, and for the necessary labor and materials incident to the emergency construction of proof models, as well as for the prosecution of field tests to demonstrate the same. It is pointed out that this sum is less than one-tenth of one per cent of the sum now available to the Quartermaster General for the purchase of military trucks, and that its expenditure at this time will certainly secure to the Army the saving of millions of dollars in first cost of trucks, and in the more important ultimate costs of maintenance and repair parts.

15. It is the desire of this committee to present as forcefully as possible the advisability of purchasing at this time only as many trucks as will be actually needed prior to the time when the standard trucks can be obtained in large quantities. Modified trucks constructed by old line manufacturers, if contracted for at the present time in large quantities for delivery throughout the fiscal year of 1918, will leave such a small number of additional trucks to be purchased that the standardization of trucks for military use will become entirely impracticable, preventing the Government from obtaining for years to come the general cooperative effort necessary to evolve an adequate standard design of military truck that can be produced by a large number of manufacturers. It will further tend to stifle that spirit of competitive buying which has always been a fixed policy of the War Department.

(Signed)

WM. M. BRITTON.
K. W. ZIMMERSCHIED.
COKER F. CLARKSON.

[*Inclosure No. 9.*]

JULY 16, 1917.

The Quartermaster General.

Mr. F. A. Scott, chairman General Munitions Board, Council of National Defense,
Munsey Building, Washington, D. C.

Situation relative to motor trucks needed by the Army.

1. Referring to your letter of the 12th instant regarding the industrial situation as affected by the pending award of contracts for the furnishing of motor trucks to this department, you are advised that this office has fully realized the importance of making award of contracts at the earliest possible date consistent with the best interests of the Government, and that it has been impracticable to make proper awards until the present time.

2. You are further advised that this office has just awarded contracts for the furnishing of approximately 11,000 motor trucks, and it is believed that this action will entirely relieve the situation referred to in your letter.

3. The number of trucks above referred to will be entirely adequate for the needs of this department until January, 1918, after which time it will be possible to secure in large numbers standardized trucks having interchangeable parts, and which comply almost completely with the requirements of the standard specifications.

Respectfully,

HENRY G. SHARPE,
Quartermaster General, United States Army.

[Inclosure No. 10.]

JULY 16, 1917.

Memorandum for: The Chief of Staff.

Subject: Standardization of motor trucks.

1. This office has for a period of about two years been endeavoring to secure motor trucks which are entirely suitable for use in the military service, and has, with the assistance of the Society of Automotive Engineers, prepared various standard specifications for the purchase of motor trucks, and has been endeavoring during that period to standardize the construction of military motor trucks to the fullest possible extent.

2. It was not at first believed possible to completely standardize these vehicles so that all parts of same would be completely interchangeable. After several conferences with a large number of the leading automotive engineers of this country, it has become evident that the ultimate and thoroughly complete standardization of all parts of motor trucks can be readily attained, provided the efforts of the War Department and the automotive engineers are concentrated toward the attainment of that end. The extent to which the engineers are cooperating with this office in the complete standardization of the various units of which the motor trucks are composed, has been a thorough surprise to this office, and has completely demonstrated the fact that standardized military trucks may be obtained in large numbers. In fact, in greater numbers than could possibly be required, provided proper moral and financial assistance is given by the War Department.

3. The work of standardization has so far been conducted in cooperation with the Society of Automotive Engineers, through various subcommittee, which committees are composed of the leading engineers of those manufacturers who are producing the standard unit assemblies used in truck construction. It was at first extremely difficult to secure much progress in standardization because of the interest of each manufacturer in retaining his individual features of design and construction, which could not, of course, be retained in case of a final standardization being decided upon. However, when the urgent military necessity of this ultimate standardization work was made known to the engineers, they at once relegated their individual prejudices and interests, and heartily cooperated in the design of units which would include the best and most advantageous features of each of their individual designs. This action is resulting in the design of unit assemblies which are far superior to any individual units which are being constructed at the present time. It was at first believed that it would be impossible to carry this standardization further than the design of the fastenings and connections of these units, which would result in the unit assemblies of different manufacturers being entirely interchangeable, but which would vary in details of internal construction and design with each individual manufacturer.

4. During the last conference with the engineers, which was held at the Ohio State University, Columbus, Ohio, on July 9 and 10, 1917, it became evident that it will be thoroughly practicable to effect the complete standardization of each individual unit in all its details in a comparatively short time, thus resulting in the complete and thorough standardization of every individual part of which the motor trucks will be composed. The extreme military importance of such a design is of course obvious. The manufacturers of transmissions have already perfected a design which is admitted to be the very best manner by all of the manufacturers of transmissions, even to the tolerance used in the construction of each individual part. This procedure will make every part of the transmissions interchangeable, irrespective of the manufacturer of these parts. It is proposed to effect this same standardization in the design of every individual unit of which the trucks will be composed.

5. The excellent work which is being accomplished by the War Department toward the complete standardization of aeroplanes is an indication of what may be done in the standardization of motor trucks. It should be pointed out, however, that the same problems which are confronting those connected with the standardization of aeroplanes will not be met in the standardization of motor trucks, for the reason that in aeroplane construction there are a number of problems which have not been solved in a thoroughly satisfactory manner. In the standardization of motor trucks, however, it will only be necessary to incorporate all of the various well-known and thoroughly tried advantageous features which are found in the various motor trucks which have already been constructed in large numbers. It will then require but a very brief period of field service to demonstrate the practicability of these standardized trucks, and to justify their production in large numbers for use in the military service.

6. Your intention is invited to the inclosed memorandum which was submitted to this office by a committee composed of Capt. Wm. N. Britton, of this office, Mr. K. W. Zimmerschied, engineer of the General Motors Co. and member of the automotive committee of the Council of National Defense, and Mr. Coker F. Clarkson, general

manager of the Society of Automotive Engineers. There is also inclosed with the memorandum referred to a copy of a letter received by this office under date of July 12, 1917, from Mr. F. A. Scott, chairman of the General Munitions Board of the Council of National Defense, in which recommendations were made regarding the necessity for immediately placing orders for motor trucks and also copy of a letter dated June 21, 1917, from this office to the Society of Automotive Engineers, in which attention is invited to the urgent necessity for the standardization of the various parts of which the motor trucks are composed, and urging that this work of standardization be carried to completion at the earliest practicable date.

7. Your attention is especially invited to the very important details of this standardization work, and also a proper policy for the purchase of motor trucks, mentioned in the memorandum above referred to. The recommendations in that memorandum are fully concurred in by this office, and it is recommended that the sum of \$175,000 be allotted for use in completing the standardization of motor trucks at the earliest practicable date. This amount should be available for the employment of consulting engineers, mechanics, engineers, draftsmen, and other employees, for the purchase of the necessary apparatus, materials, and supplies, for the rent of adequate quarters, and for the necessary labor and materials incident to the emergency construction of proof models, and for the prosecution of the necessary field and shop tests, the amounts expended to be utilized in connection with the standardization of motor vehicles.

8. In the prosecution of the work above referred to it is proposed to employ the best consulting engineers obtainable, and also to employ the best specialists in connection with the design and test of each individual unit of which the trucks will be composed.

9. In the standardization of these motor trucks it is proposed to follow the same method of procedure which has been found so thoroughly successful in the present standardization work which is being conducted by the War Department in the design and construction of aeroplanes. No effort will be spared to bring this work to a satisfactory conclusion at the very earliest practicable date, and to obtain standardized motor trucks which will be the result of the best efforts of the leading automotive engineers of the United States and which must result in the production of vehicles which will be far superior for use in the military service to any vehicles which are being constructed at the present time. From all information at hand, it appears that this department will be able to obtain standardization motor trucks in large numbers, beginning about January 1, 1918. The next conference with the manufacturers and engineers interested in the manufacture of motor trucks and unit assemblies for same will be held under the auspices of the Society of Automotive Engineers at the Ohio State University, Columbus, Ohio, on July 20, 1917. At that time additional information will be obtained in reference to the progress of the designs of the standardized units, and definite information will also be obtained regarding the time when it will be possible to obtain in large quantities the standardized unit assemblies, and also the completed standardized trucks.

10. This office has awarded contracts for the delivery of more than sufficient trucks to meet the needs of this department to January 1, 1918, and has also awarded contracts for all approved four-wheel type trucks obtainable to June 30, 1918.

11. It should be pointed out that the trucks which are being purchased at present are to be used for immediate needs only, and after the standardized motor trucks are obtainable in large quantities it will be desirable to utilize these trucks in training camps, or to dispose of them for commercial use, or for use by the allies, in order that all trucks used in our military service will be only of the standardized design and sizes, thus reducing the problem of maintenance and operation to an absolute minimum.

12. It should be carefully noted that the trucks which will be obtained as a result of this standardization will not be experimental in the least degree. New and untried devices will not be included in their design. The only reason for experimentation and testing will be for the purpose of demonstrating the relative advantages of various devices and features of design, each of which has already thoroughly demonstrated its complete practicability. The tests will be conducted for the purpose of selecting the very best of the many approved devices and designs.

13. It is recommended that the allotment of funds above referred to to be used in connection with the standardization of motor trucks, be made available at the earliest practicable date.

HENRY G. SHARPE,
Quartermaster General United States Army.

TRANSPORTATION OF THE ARMY AND ITS SUPPLIES. (SUPPLEMENTAL ESTIMATE.)

Original estimate..... \$809, 532, 025. 72
 Supplemental estimate..... 144, 647, 990. 00

NOVEMBER 15, 1917.

From: The Remount Division.

To: The Estimates Branch.

It is estimated that 90 divisions, having an aggregate strength of 27,313 officers and men, will be organized from 3,000,000 men. On this basis the amounts shown on the attached statement will be required for the purchase of supplies and equipment, the nature of which, or because of time required for manufacture and delivery, would preclude delivery within six months after the orders are placed.

The number of vehicles, harness, and aparejos estimated for is based on cablegram No. 224, dated October 18, 1917, from Gen. Pershing, copy of which is hereto attached. This cablegram requests 600 escort wagons as an initial supply and 100 escort wagons monthly for each 25,000 men. Although no mention is made in this cablegram with reference to medical, ration, and water carts, also combat wagons, the number of these vehicles estimated for is based on the initial supply for a division plus one-sixth of this allowance as an automatic monthly supply for 25,000 men.

JOHN S. FAIR,
Colonel, Quartermaster Corps, National Army.

NOVEMBER 14, 1917.

Memorandum for the Estimates branch.

There is submitted herewith supplemental estimate for the fiscal year 1919, as requested in your memorandum of the 12th instant, covering funds to complete the equipment for 3,000,000 men, which equipment is of such a character as could not be delivered under contract within six months after orders are placed.

C. B. DRAKE,
Lieutenant Colonel, Quartermaster Corps.

[Appropriation: Supplies, services, and transportation, 1919. Amount \$53,956,000.]

Item A. T. 229g.—Other vehicles: Purchase of motor trucks.

	Heavy (3 t. n.).	Light (repair).
Motor trucks required for 90 divisions (3,000,000 men) under latest tables of organization.....	21,600	1,170
Army and corps lines of communication and general use (100 per cent).....	21,600	1,170
Total.....	43,200	2,340
Already provided for 45 divisions under 1918-19 appropriations.....	30,476	810
Remaining to be supplied for 90 divisions.....	12,724	1,530

The estimated cost of this number of motor trucks is as follows:

12,724 heavy motor trucks, at \$4,000 each..... \$50, 896, 000
 1,530 light motor trucks, at \$2,000 each..... 3, 060, 000

Total..... 53, 956, 000

APPENDIX.

JANUARY 17, 1918.

Memorandum for Transportation Division:

At the hearings before the House Committee on Military Affairs information was requested as follows:

"Average cost of private soldier, both in this country and in France, of clothing, transportation, and everything that we furnish. What we want is an estimate of the cost to maintain a soldier across the seas, including tonnage, and the statement is to show the amount per man per year in France."

"Can you give us a statement of what tonnage will be required per man per year so that we can give an estimate of what tonnage will be required to maintain 1,000,000 men across the seas?"

"Put printed forms in hearings as to specifications covering animals."

It is presumed that the above request calls for the specification of animals purchased by the Quartermaster Corps.

"How many mules and horses were purchased by the allied nations before this country got into the war and what was paid for them and the character of the horses?"

"How many purchasing zones have we and what is the area of each for animals?"

It is requested that this information be furnished at the very earliest moment.

By direction of the Acting Quartermaster General:

J. Q. A. BRETT,
Lieutenant Colonel, Quartermaster Corps, National Army.

JANUARY 19, 1918.

Memorandum to the Supplies Division:

To enable the water transport branch to reply to the attached memorandum, it is requested that statement be furnished showing the approximate weight of supplies and equipment required per man per annum in France.

P. H. McCrory,
Captain, Quartermaster Corps, National Army.

JANUARY 23, 1918.

Memorandum to the Storage Division (statistical branch):

1. Information is requested as to whether data called for within can be furnished from the records of the Storage Division.

L. HARDEMAN,
Lieutenant Colonel, Quartermaster Corps, National Army.

JANUARY 29, 1918.

Memorandum to the Water Transport Division:

Replying to the request of January 19 above, it is estimated that the approximate weight of supplies and equipment required per man per annum in France is 5.18442 short tons.

F. L. DEVEREAUX,
Major, Quartermaster Corps, National Army.

JANUARY 31, 1918.

Memorandum for the Finance and Accounting Division, Estimates Branch:

In connection with request contained in attached memorandum of January 17 for statement of the approximate tonnage required for the transportation of supplies and equipment required to maintain 1,000,000 men at overseas station, the following is submitted, based on the estimates of the supplies division (clothing and equipment) of approximately 5 short tons per man per annum, or 10,000 pounds.

It is estimated that it will require 104 ships of an approximate gross tonnage capacity of 6,000 tons making eight trips per year for the transportation of supplies and equipment for 1,000,000 men stationed in France.

In this connection it is remarked that the embarkation service is engaged in the preparation of data along the lines of the within request which it is believed is intended to cover equipment of all classes.

R. J. BURT,
Lieutenant Colonel, Quartermaster Corps.

ARMY APPROPRIATION BILL, 1919.

COMMITTEE OF MILITARY AFFAIRS,
HOUSE OF REPRESENTATIVES,
Washington, D. C., January 14, 1918.

STATEMENTS OF MAJ. GEN. HENRY G. SHARPE, QUARTERMASTER GENERAL, ACCOMPANIED BY BRIG. GEN. I. W. LITTELL, COL. H. J. HIRSCH, MAJ. L. HARDEMANN, MAJ. R. C. MARSHALL, JR., AND CAPT. C. P. DALY, QUARTERMASTER CORPS.

WATER AND SEWERS AT MILITARY POSTS.

The CHAIRMAN. The next item in the bill, General, is on page 40:

Waters and sewers at military posts: For procuring and introducing water to buildings and premises at such military posts and stations as from their situations require it to be brought from a distance; for the installation and extension of plumbing within buildings where the same is not specifically provided for in other appropriations; for the purchase and repair of fire apparatus, including fire-alarm systems; for the disposal of sewage, and expenses incident thereto, including the authorization of toilet paper; for repairs to water and sewer systems and plumbing within buildings; for hire of employees, \$19,735,546.

Gen. SHARPE. There were two funds appropriated at the last session of Congress, Mr. Chairman. Under the provisions of the act of June 15, you gave us \$10,546,169, and then under the act of October 6, you gave us \$23,886,500. The first was a reduction from our estimate of \$12,912,500. That makes the total appropriated \$10,546,169 plus \$23,886,500, or \$36,432,669.

The CHAIRMAN. Will you put a list of the items in the record?

Gen. SHARPE. I have a table giving each one of the items, commencing with item No. 237 and including item No. 248.

The CHAIRMAN. I wish you would also put in the record a statement showing how much you have expended up to date out of your last year's appropriation, and how much you have under contract.

Gen. SHARPE. We will do that, and also put a statement in the record explaining each one of the items.

Mr. Chairman, I also want to submit, after the recapitulation, which gives the total of the various items, the subdivisions of the appropriation, as it has been divided into the apportionment for the United States and also for the Philippine Islands.

The CHAIRMAN. We will be glad to have that.

I suppose the principal reason for the decrease in the appropriation is that you have already taken care of the initial cost and that much of the appropriation will not be needed during the next fiscal year.

Gen. SHARPE. Yes, sir.

Capt. DALY. We have a deficiency under that appropriation now.

Mr. ANTHONY. Does that appropriation take care of the sewers at any of the cantonments?

Gen. SHARPE. Yes, sir.

Mr. KAHN. I saw in the newspapers two or three days ago, General, that the pipes had burst down at Camp Meade and that there was danger of their water supply being shut off. How about that?

Gen. LITTELL. The pipes were frozen everywhere in the country, Mr. Kahn, and, of course, that place is no exception at all, but they have remedied that. The greatest trouble there was from the danger of the dam going out where they had impounded the water. That danger come from the ice covering the water backed up by the dam. They blew up the ice and relieved that situation at that dam, and it is all right now.

Mr. KAHN. What is your source of supply—the Patuxent River?

Gen. LITTELL. Yes, sir.

Mr. KAHN. Did the freezing of the pipes occasion any considerable hardship on the camp on account of lack of water?

Gen. LITTELL. No more than anywhere else.

Mr. KAHN. How deep do you bury the pipes?

Gen. LITTELL. Out there at Camp Meade they are buried from 2 to 3 feet deep.

Mr. OLNEY. Does the freezing line go below 2 feet at that particular location?

Gen. LITTELL. It has. Usually in this country it has only gone down about a foot and a half during extreme seasons, but this year it went down further than that.

Mr. KAHN. It was an unusual condition, although that condition does happen once in a while in the vicinity of the city of Washington. I can remember that in 1899 there was a condition like that. Do you think it would be advisable to bury the pipes deeper, because really, to my mind, it seems that there might be a repetition of that condition at any time?

Gen. LITTELL. It is going to cost a good deal more to bury them deeper. This condition of weather has been so very unusual that it has caught people everywhere. Right in the city the pipes have frozen.

Mr. KAHN. Of course, in the city you are in this kind of a situation: If your water pipe is frozen and your neighbor's pipe is not frozen, you can still get some water; but in the camps if the pipes are frozen you can not get water.

Gen. LITTELL. I do not think there is any danger of their freezing, so far as the main lines are concerned.

Mr. KAHN. That is what I had reference to especially, whether the main lines of pipes were sufficiently protected.

Gen. LITTELL. There is not much danger of that. I do not think there is any danger of that.

Mr. KAHN. How many second-feet of water do you deliver at a camp like Camp Meade?

Gen. LITTELL. I have not figured that out, but we have been figuring on furnishing from about 50 to 55 gallons per capita. As a matter of fact, they have used much more than that. We can not keep them down to that.

Mr. KAHN. In the various camps throughout the country is there an ample supply of water everywhere?

Gen. LITTELL. What we consider an ample supply, but it is some times a precarious supply. Take, for instance, Camp Devens, in Massachusetts. That is right up to the limit, practically substantially, of what is the supply they need. They use more than we think they ought to use, and that is always the case in all the camps.

We try to keep them down to 50 or 55 gallons, if possible, but the moment the steam heat comes on they use a great deal of water in addition to their ordinary needs, and we have had to supplement the supply they are getting from the city, and we have also put in some more wells, from which we are furnishing them.

Mr. KAHN. Were you able to get an additional supply readily?

Gen. LITTELL. Yes, sir.

Mr. McKENZIE. I would like to ask the general if it would not be a wise thing, and whether it would not guard against freezing, if, when the thermometer drops to a certain point, they would allow the water to move through the pipes—to flow through the pipes. Would not that prevent freezing?

Gen. LITTELL. Yes. They have an organization in each of the camps to look after the utilities, and if they properly attend to their business the officers of those utilities units will see that the commanding officers of the barracks, and all other places where the water is, will allow it to drip, and keep it from freezing, as we do in our own houses.

Mr. KAHN. What is the size of the main-line pipes?

Maj. MARSHALL. From 8 to 12 inches; there are two lines of 12-inch pipe.

Mr. KAHN. And the service pipes?

Gen. LITTELL. They are from 2 to 4 inches.

Mr. ANTHONY. Does this item carry anything for the purpose of improving the water supply at Camp Doniphan?

Gen. SHARPE. Not specifically. At Fort Sill there is provided the construction of an additional pump and raising the old pump house. That is at Fort Sill. There is not anything specifically for Camp Doniphan.

Mr. ANTHONY. What kind of water do they have at Camp Doniphan? What is the source of supply?

Gen. LITTELL. There is a separate supply, different from that from Fort Sill. The authorities there at Lawton raised the dam, so that they could get a sufficient supply of water.

Mr. ANTHONY. You are supplying the men there from different water from that which is supplied to Fort Sill?

Gen. LITTELL. From the water collected at the dam.

Mr. ANTHONY. From the rainfall that is collected in the dam?

Gen. LITTELL. Yes, sir.

Mr. ANTHONY. Has that not turned out to be pretty bad?

Gen. LITTELL. There is a good deal of vegetable matter in it, which causes a certain odor and it is disagreeable to drink.

Mr. ANTHONY. I had a statement from some men there, in which they stated that there was a green slime on these pipes which supply the camp, and that they could not fail to notice the result of that in drinking the water. Are those reports true?

Gen. LITTELL. Yes, sir.

Mr. ANTHONY. Who is responsible for locating a camp where there are such vile water conditions as that?

Gen. LITTELL. As I understand it, that water is unpleasant to drink, but is not dangerous.

Mr. GREENE. Is that what is sometimes called alkali, which frequently gets into the sources of the water?

Gen. LITTELL. That is what it is. We counteract the effects of that by using sulphate of copper.

Mr. ANTHONY. Were there not times when the water supply was very meager, as well as bad, at Camp Doniphan?

Gen. LITTELL. That was before they could finish the pipe lines.

Mr. ANTHONY. I had a letter from a man out there, in which he said the water supply was so meager that the sick men were not able to get water to bathe in.

Gen. LITTELL. At first, arrangements were made to put in the pipe lines by the city, and we had a great deal of difficulty in getting pipe, and until the pipe line was installed there was a shortage of water there.

Mr. ANTHONY. This was one of the big camps established in the summer, was it not?

Gen. LITTELL. It was established way late.

Mr. ANTHONY. I want to ask you another question in reference to the sewerage at Camp Funston. Have you had any trouble with the natural drainage and sewerage there?

Gen. LITTELL. I do not remember any.

Mr. ANTHONY. That camp is located, as I recall, on an absolutely flat piece of land?

Gen. LITTELL. Yes, sir.

Mr. ANTHONY. Where there is no natural drainage. Would it be considered wise to locate a military camp on a piece of land like that?

Gen. LITTELL. That would depend upon whether the water can be carried off by proper means.

Mr. ANTHONY. Is it not a fact, after periods of rain there, there have been 6 inches of water standing in that camp?

Gen. LITTELL. That has not been reported to us.

Mr. ANTHONY. I have seen it that way, and there has been a great deal of complaint about it.

Gen. LITTELL. The Quartermaster Department has nothing to do with the selection of the camp sites.

Mr. ANTHONY. Are not these matters of the supply of water and the question of natural drainage taken into consideration when the camps are located?

Gen. LITTELL. The camps were directed to be located, or, rather, the department commanders were all directed by the War Department to select the camp sites, and the department commanders selected boards who picked out the camp sites and recommended the locations to the department commanders, and the department commanders made their recommendations to the War Department, approving the location of the camp sites by the various boards, and the proposition was put up to us to do the best we could with each particular camp.

Mr. ANTHONY. The general location was picked out by the department commander, and the camp was directed to be located on that

particular reservation. Who is responsible for placing that camp on an absolutely flat bottom, when a mile and a half back from that location they could have gotten a site on beautiful rolling country?

Gen. LITTELL. The department authorities.

Mr. ANTHONY. Who would locate the exact spot where the camp would be; would not the engineer officers do that?

Gen. LITTELL. Yes, sir; but they were all directed to consult with the department commanders in the location of the camps, as to the general site.

Mr. ANTHONY. What kind of a sewerage plant have you at Camp Funston? Do you depend upon the natural fall to carry the sewage off or do you have a mechanical device for that purpose?

Gen. LITTELL. I do not remember whether it has to be conducted up to the levels or not. We would have if there was not sufficient fall—I mean if the camp was located so that a sufficient fall could not be gotten between the camp and the final place of discharge—they broke it up into steppes.

Mr. ANTHONY. So that the Quartermaster's Department is not responsible for the location of these camps in any way, and you build the sewerage system at the camp sites where you are told to do so by the general commanding the department?

Gen. LITTELL. Yes, sir.

Mr. ANTHONY. Regardless of whether they are proper locations or not?

Gen. LITTELL. We had no choice in the matter. We did the best we could with each situation.

Mr. ANTHONY. You are charged with expending the money for sewers and the men in your department are supposed to be skilled in that line. If you are told to build a camp at a certain place where there is no proper drainage, would you go ahead and build it?

Gen. LITTELL. We could, if the case was so serious that it could not be done—we would have to write a report to the authorities that it could not be done.

Mr. ANTHONY. There was a case at Camp Doniphan, where it was obvious that there was an inadequate water supply, and there was a case at Camp Funston, where any layman could see that there is improper drainage.

Gen. LITTELL. The reports were to the effect that if the pipes were put in connecting the camp with the nearest city water supply there would be a very abundant supply of water.

Mr. KAHN. At Camp Doniphan?

Gen. LITTELL. At Camp Doniphan; yes, sir. It is the same water that is supplied to the town of Lawton.

Mr. McKENZIE. In the first place, General, the country was divided into districts, so far as the establishment of these cantonments was concerned, and they were to establish 16 of these cantonments?

Gen. LITTELL. The country was divided into districts.

Mr. KAHN. There were to be 32 of them, all told.

Mr. McKENZIE. Who was responsible for making the geographic division of the country?

Gen. LITTELL. The country was divided into draft districts, so that there would be so many men in the draft in certain districts, and the boundaries of the districts were determined by the number of men in a certain area.

Mr. McKENZIE. Who did that?

Gen. LITTELL. I do not know. I suppose it was done by the Provost Marshal General.

Mr. McKENZIE. The next step was to find the location for the camp in each particular district?

Gen. LITTELL. Yes, sir.

Mr. McKENZIE. That was provided for by the appointment of a board of Army officers to make the selection in each particular district?

Gen. LITTELL. Yes, sir.

Mr. McKENZIE. In all of these districts there were perhaps a number of cities and towns competing with one another to have the camp located at their particular city or town. This board of officers would then go out and examine all the proposed sites and report back to the commanding officer of that particular division. Is that not true?

Gen. LITTELL. Yes, sir; that is true.

Mr. McKENZIE. And the arbitrary power of locating the site was in the hands of the commanding officer of that department, on the recommendation of the board of officers, which was submitted to him; is that not true?

Gen. LITTELL. That is right; yes, sir.

Mr. McKENZIE. As a matter of fact, no officer in the Quartermaster's Department in the city of Washington had a thing to do with it?

Gen. LITTELL. No, sir.

The CHAIRMAN. Gen. Littell, you are really at the head of that department of the work, but you could not override or disapprove the final decision of the commander of any department?

Gen. LITTELL. We, of course, knew nothing about the actual conditions or state of affairs in regard to the particular site they had picked out, and we could not know that until after we got a topographical survey.

The department commander was directed to select the site and report it to the War Department. The department commanders carried out those instructions by selecting boards usually consisting of a representative of the department commander himself, one of the quartermasters, and a medical officer.

Mr. McKENZIE. I know from personal experience in regard to the locating of Camp Grant at Rockford, Ill., how that was done. There were a number of towns in that district competing for the location of the cantonment, and in company with some gentlemen I appeared before Gen. Barry in the city of Chicago and laid the matter before him, and he said he would locate that camp at the place this board recommended, regardless of what anybody on the outside might say, and he could not do otherwise. I do not think there is any blame to be attached to the War Department.

Mr. ANTHONY. Following that statement by Mr. McKenzie, is it not a fact that those camps were located finally at sites different from those recommended by the board of officers?

Gen. LITTELL. I do not know.

Mr. ANTHONY. You would not know as to that?

Gen. LITTELL. No, sir.

Mr. ANTHONY. I know they were. I do not refer to any in your district, Mr. McKenzie; but I had in mind one in Kentucky, where I think the board recommended a site near Lexington, and the camp was finally located near Louisville.

Mr. QUIN. Can you tell me about the water supply at Camp Beauregard?

Gen. LITTELL. No, sir. We have at least 40 of these camps and cantonments, and it is impossible for me, without going to the records, to remember all the facts in connection with all of them. I remember some of the large and difficult ones, but I can get that information for you in regard to Camp Beauregard.

Mr. QUIN. I wish you would do that, and put it in the record. The Mississippi troops are there, and I would like to know about that.

Mr. KAHN. Do you recall the date when the men of the National Army and the National Guard were ordered to the various cantonments? It was some time in September, was it not?

Gen. LITTELL. September 1 was the date fixed, and then it was changed to September 5. That was for the men of the National Army.

Mr. KAHN. Yes. I have heard a great deal of complaint that the camps at that time were not in a state of completion, or near a state of completion. Can you give us any information on that point?

Gen. LITTELL. There were lots of things about the camps that were not complete. We were asked if we could take care of a certain number of men on the 1st of September, and we replied that we could, and that we could have shelter for them, and we did. We had shelter for all they desired us to have shelter for on that date.

There were a lot of extras ordered in that time that we did not expect. In a good many of the camps they ordered 1,500 officers in the very first thing, and, of course, they had to put up with some discomfort, because we had not expected them, and had not reached the point where quarters for that many officers had been completed. These were student officers sent from the training camps.

But we did have quarters for the first section of the draft. There were lots of things that were incomplete, and we could not possibly get them complete. But we had enough of the arrangements completed to house the men and make them comfortable.

Mr. KAHN. At all the camps?

Gen. LITTELL. At every one of them, as far as I remember.

Mr. KAHN. Did you have enough quarters for the second lot of men that were assigned to the cantonments? As I recall, the men came in increments about two weeks apart, up to October.

Gen. LITTELL. The first lot went in on September 5 and the second lot went in on September 19.

Mr. KAHN. Then, there was another lot early in October?

Gen. LITTELL. Yes, sir.

Mr. KAHN. What was the state of completion of the camps when the second lot came on?

Gen. LITTELL. We had shelter for each increment as they were called for. In fact, in most of the camps, we had more than they needed. But, as I say, there were some deficiencies that we were unable to complete, certain things that it was absolutely impossible to get at that early stage, and complete them all.

For instance, some of the steam-heating plants were incomplete. You could not get the boilers, and there was not anything you could do to get the boilers, and we had to wait until they were made.

Mr. KAHN. That was one of the complaints I heard, and, of course, I wondered whether the difficulties could have been avoided by hold-

ing the men back for a couple of weeks until those things could have been settled.

Gen. LITTELL. That could have been done, but it would have resulted in the greatest amount of confusion.

Mr. KAHN. But the confusion would not have been as bad as the pneumonia.

Gen. LITTELL. I do not think the pneumonia is entirely due to the lack of completion of the camps.

Mr. GORDON. It is due to lack of clothing, is it not?

Gen. LITTELL. It is due to various things. That comes from measles, and the Surgeon General claims it is because the men were crowded.

Mr. KAHN. Why were they crowded?

Gen. LITTELL. I do not know.

Mr. KAHN. Was there a greater number of men than you had accommodations for?

Gen. LITTELL. The instructions were that there would be so many men placed in a tent, and they had a stove in the tent, and the natural inclination of a soldier is to shut that up tight, so that there would be no ventilation. Some one has to stand guard to keep that tent open, so that they will have ventilation.

Mr. KAHN. They were crowded in more than you thought they would be, because you did not provide accommodations for as many as really came. Was that not it?

Gen. LITTELL. No, sir.

Mr. KAHN. Have you accommodations now at all the camps for the 200,000 men of the National Army who have not as yet gone to the camps?

Gen. LITTELL. We have. The camps are completed for the full number of men we were directed to prepare them for.

Mr. KAHN. Since when were they thus completed?

Gen. LITTELL. I think every one of the camps were practically completed on the 1st of December. There are some few little things to be finished. I do not know that they will ever be finished, because as long as there is any one there something has to be done.

Mr. KAHN. Of course changes have to be made.

Gen. LITTELL. But as originally planned they have been long ago fixed up.

Mr. KAHN. Did you have to expand them?

Gen. LITTELL. Yes, sir. By reason of the adoption of the Pershing division and the requirements of the Surgeon General we had to do a great deal of additional construction. For instance, we first built barracks for 200 men, and then, under the requirements of the Surgeon General and the adopting of the Pershing division, the companies were increased to 250 men apiece, and therefore it was necessary to comply with both of those conditions, using three barracks which were originally intended for three companies to take care of two companies, and therefore we had to build a lot more barracks.

Mr. KAHN. Of course, making those additions entailed a great deal of additional expense, too.

Gen. LITTELL. Yes, sir.

Mr. KAHN. Much more so than if you had built them for the larger units at first?

Gen. LITTELL. Yes, sir. It also entails expense in the extension of sewer pipe and steam heating, and everything else you can think of.

Then we had a lot of extra buildings like buildings for schools, officers' schools, and men's schools, and theaters, and additional post exchanges, and units for instruction in gas fighting, and extra stables, and things of that kind.

Mr. KAHN. What, in your opinion, is the approximate cost of the different cantonments? Can you put that in the hearing?

Gen. LITTELL. Yes, sir. I would like to get the latest revised figures.

Mr. KAHN. Yes. I would like to have the cost of each cantonment. Speaking of the sewerage which Mr. Anthony was talking about, have you any aseptic tanks anywhere for the destruction of the sewage?

Gen. LITTELL. When it is necessary; yes, sir.

Mr. KAHN. Have any tanks been used at Camp Funston for the purpose of destroying the sewage?

Gen. LITTELL. I have a table that shows all of that.

Mr. KAHN. Can you put into the hearings something about that?

The CHAIRMAN. May I suggest that instead of doing that now, when we reach the subject of barracks and quarters, the General be prepared to give us that information?

Gen. LITTELL. Yes, sir. I can give you the per capita cost of these cantonments now.

Mr. KAHN. How much is that?

Gen. LITTELL. For the number of men originally intended for each camp, it is about \$220 per man.

Mr. GARRETT. General, did the appropriation for these cantonments or any of the buildings in the cantonments become exhausted before they were completed?

Gen. LITTELL. Yes, sir.

Mr. GARRETT. How did that so happen?

Gen. LITTELL. In the first place, we had a certain amount of money for the construction of these cantonments. We were told to go ahead and do the best we could with that and try to keep within that limit, which we did, to the very best of our ability.

But it was soon found out, as I just explained to Mr. Kahn, that there were a lot of additions required in way of additional buildings, facilities, and so forth, and therefore we had to have additional sums of money to build them.

Mr. GARRETT. In the case of Camp Logan, in Texas, I visited that camp in the months of October and November, and the base hospital was not complete. It lacked the sewerage and heating. That is located at Houston, Tex.

Gen. LITTELL. That is a camp; yes, sir.

Mr. GARRETT. There was quite a good deal of complaint to the effect that the base hospital was not in condition at that time for the men that were confined in it. I inquired of the contractor and also of the commanding officer there as to why that was, and he said the appropriation had given out.

Gen. LITTELL. I do not believe his statement is accurate. He evidently did not know about it. That would not have delayed their construction at all, because if we had found out that there was not sufficient money to complete that hospital, we would have asked the Secretary of War to have authorized a deficiency.

The hospitals were constructed by the plans prepared by the Surgeon General's office, and the original intention at these camps was to make them all canvass, and the Surgeon General, in accordance with instructions from the War Department that it would be a canvass camp, asked for a lot of hospital tents, and the department was then getting tentage as fast as possible, but the hospital tents could not be supplied in time, and we were instructed to provide for the sick by building shelters of wood, and they furnished plans to comply with those instructions.

Mr. GARRETT. Where did the fault lie, if there was any fault, because of the failure of that base hospital to be completed before the men arrived there, or even after they had been there quite a while, and is that hospital completed and well equipped now?

Gen. LITTELL. Yes, sir; it is completed now. You must remember, Mr. Garrett, that the building of these camps was held back and we were not ordered to construct them until way late, and then, it having been decided to build hospitals, they were practically the only buildings that were erected there, except the mess halls and the shelters for the latrines.

The design was very simple, and the Surgeon General's instructions were to omit plumbing and sewerage, which we did, and then later it was decided that they wanted plumbing and sewerage, and we were called upon to put that in, and in every instance where that question was referred to the Quartermaster Department the approval of the suggestion was recommended.

When they finally asked to have the sewerage put in the hospital at the National Guard camps, it was submitted to us, and we recommended it, and it was returned to us authorizing it for 10 of the 16 camps.

Later we recommended it for the other six camps, and that was also approved. That carried it so far ahead that it was absolutely impossible to get all that done at the time the troops were there, but the shelter was there.

Mr. GARRETT. That was due to a change in the plans, and not because of the lack of money?

Gen. LITTELL. Yes, sir.

Mr. TILSON. Have you aseptic tanks at all these camps?

Gen. LITTELL. No, sir; we only put them where it was absolutely necessary. In some places they do not object to the discharge of the sewage, and then, of course, we do not put the aseptic tanks in, because it is more or less expensive. But wherever there is any objection made to the ordinary discharge of the wastage, we put in the purifying outfit.

Mr. LUNN. Are these sewerage disposal plants on a small scale being installed in the camps where the ejection of the sewage is objectionable?

Gen. LITTELL. We have only installed them for the hospitals.

Mr. LUNN. Does that entail quite an expense, or can it be cheaply done?

Gen. LITTELL. Not for the hospitals alone.

Mr. GREENE. How far has the old sink for the sewerage been displaced by anything like water-flushed sewerage?

Gen. LITTELL. Of course, it is in all the cantonments. The idea in the National Guard camps was that they would dig pits, and, of

course, use them, and drain them out in the ordinary way, as they have been doing all along, and burn them out with kerosene or crude oil. I think there were two of the camps where it was shown and represented that the soil was of such a nature that some sort of a water-flushed sewerage was absolutely necessary, and in those cases we have installed them.

Mr. GREENE. The cantonments have permanent sewerage?

Gen. LITTELL. Yes, sir; they all have modern sewerage systems, shower baths, hot and cold water, electricity, laundries, and all sorts of things of that kind.

Mr. TILSON. Why was there so great a difference made in the preparations to take care of the National Army and National Guard? It seems the National Army had everything they could want. Those camps where I have been have been well taken care of, whereas the National Guard camps have nothing.

Gen. LITTELL. I do not think it would hardly be fair to take my answer to that, because I have not been informed as to why it was. I can only surmise.

Gen. SHARPE. There has been no information about it and I can only surmise, too. My surmise is that the idea was that the National Guard would not stay in the camps but be moved almost immediately out of them and go abroad.

Mr. TILSON. That answer was made to me in September, and I told them they would suffer if they had to stay there until the first of December, but their idea was that they would be gone by the first of December.

Gen. LITTELL. We anticipated that there would be some call for the improvement of those camps, and we did ask for an item in the appropriation bill for the conversion of those camps into cantonments.

Mr. TILSON. Of all the hardships that a soldier has to go through in a camp, the lack of modern sewerage conveniences is the greatest of all. The men in the National Army have had up-to-date facilities, the same as we have in the cities, whereas the National Guard has been absolutely without anything at all. Not only have they had to live in tents and freeze to death, but they have had absolutely nothing in the way of modern conveniences.

Gen. LITTELL. The money was not appropriated when we anticipated that there would be some such demand.

The CHAIRMAN. You do not mean that in the matter of sewerage the National Guard camps are not supplied?

Mr. TILSON. They are using latrines, as I understand it, entirely.

Gen. LITTELL. All but two of them.

The CHAIRMAN. I thought that at Camp Sheridan you provided sewerage.

Gen. LITTELL. That was for the hospital. There are two of the National Guard camps that have sewerage.

Mr. SHALLENBERGER. What did you do for the Regular Army?

Gen. LITTELL. If they are in camp, they have the same as the National Guard.

Mr. SHALLENBERGER. Are they not in camp?

Gen. LITTELL. Some of them are and others are in temporary buildings.

(The details of the estimate are as follows:)

WATER AND SEWERS AT MILITARY POSTS, FISCAL YEAR 1919.

Deficiency act, June 15, 1917, \$10,546,169.

Deficiency act, October 6, 1917, \$23,886,500.

Recapitulation—Appropriation, "Water and sewers at military posts," fiscal year 1919.

UNITED STATES AND PHILIPPINE ISLANDS.

Item No.	Purpose.	Appropriation fiscal year 1918.	Estimate for fiscal year 1919.			Estimate per capita 2,952,000 officers and enlisted men.
			Current requirements.	New construction.	Total.	
237	Procuring water (water systems).....	\$8,200.00	.....	\$517,211.00	\$517,211.00	\$0.175
237a	Purchase of water.....	295,858.75	\$7,778,000.00	.....	7,778,000.00	2.635
237b	Sterilizers and filters, purchase and repair of.....	16,765.62	540,000.00	.....	540,000.00	.183
238	Introducing water to buildings.....	440,583.75	.....	117,957.00	117,957.00	.040
238a	Fuel for pumping plants....	185,048.13	1,523,000.00	.....	1,523,000.00	.516
239	Installation of plumbing within buildings.....	318,048.00	.....	56,028.00	56,028.00	.019
240	Fire apparatus, purchase of..	15,625.00	55,000.00	.....	55,000.00	.020
241	Fire apparatus, repair of....	7,000.00	353,000.00	.....	353,000.00	.120
242a	Fire-alarm systems, repair of.	925.00	1,800.00	.....	1,800.00	.001
242	Fire-alarm systems, purchase of.....	.....	.....	.....	.....	.....
243	Sewage, disposal of.....	212,575.00	.....	84,550.00	84,550.00	.029
243a	Expenses incident thereto...	20,000.00	27,000.00	.....	27,000.00	.009
243b	Fuel for incinerators.....	33,000.00	232,000.00	.....	232,000.00	.079
243c	Incinerators, purchase of, repair of.....	2,062.50	49,500.00	.....	49,500.00	.017
244	Toilet paper.....	60,000.00	1,175,500.00	.....	1,175,500.00	.398
245	Water systems, repair of....	77,375.00	1,445,000.00	.....	1,445,000.00	.489
246	Sewer systems, repair of....	28,750.00	414,000.00	.....	414,000.00	.140
247	Plumbing within buildings, repair of.....	39,500.00	.....	.....	.....	.....
248	Employees.....	303,650.00	4,576,000.00	.....	4,576,000.00	1.550
	Total.....	2,115,068.75	18,955,800.00	779,746.00	19,735,546.00	6.686

Recapitulation—Appropriation "Water and sewers of military posts." fiscal year 1919.

UNITED STATES.

Item No.	Purpose.	Appropriation fiscal year 1918.	Estimate for fiscal year 1919.			Estimate per capita 2,932,459 officers and enlisted men.
			Current requirements.	New construction.	Total.	
237	Procuring water (water systems).....			\$438,111.00	\$438,111.00	\$0.149
237a	Purchase of water.....	\$262,868.75	\$7,740,000.00		7,740,000.00	2.639
237b	Sterilizers and filters, purchase and repair of.....	16,765.62	540,000.00		540,000.00	.184
238	Introducing water to buildings.....	425,583.75		98,957.00	98,957.00	.084
238a	Fuel for pumping plants....	137,048.13	1,523,000.00		1,523,000.00	.519
239	Installation and extension of plumbing within buildings.....	309,150.00		3,528.00	3,528.00	.001
240	Fire apparatus, purchase of....	15,675.00	55,000.00		55,000.00	.019
241	Fire apparatus, repair of....	5,000.00	350,000.00		350,000.00	.119
242	Fire-alarm systems, purchase of.....					
242a	Fire-alarm systems, repair of.....	625.00	1,500.00		1,500.00	.0005
243	Sewage, disposal of.....	196,875.00		54,550.00	54,550.00	.016
243a	Expenses incident thereto....	14,000.00	18,000.00		18,000.00	.006
243b	Fuel for incinerators.....	27,000.00	232,000.00		232,000.00	.079
243c	Incinerators, purchase of....	1,062.50	48,000.00		48,000.00	.016
244	Toilet paper.....	54,500.00	1,170,000.00		1,170,000.00	.399
245	Water systems, repair of....	54,375.00	1,420,000.00		1,420,000.00	.484
246	Sewer systems, repair of....	18,750.00	400,000.00		400,000.00	.136
247	Plumbing, within buildings, repair of.....	67,500.00	760,000.00		760,000.00	.259
248	Employees.....	227,350.00	4,500,000.00		4,500,000.00	1.535
	Total.....	1,834,068.75	18,757,500.00	595,146.00	19,352,646.00	6.594

PHILIPPINE ISLANDS.

Item No.	Purpose.	Appropriation fiscal year 1918.	Estimate for fiscal year 1919.			Estimate per capita 19,541 officers and enlisted men.
			Current requirements.	New construction.	Total.	
237	Procuring water (water systems).....	\$8,200.00		\$79,100.00	\$79,100.00	\$4.048
237a	Purchase of water.....	33,000.00	\$38,000.00		\$38,000.00	1.945
237b	Sterilizers and filters, purchase and repair of.....					
238	Introducing water to buildings.....	15,000.00		19,000.00	19,000.00	.972
238a	Fuel for pumping plants....	48,000.00				
239	Installation and extension of plumbing within buildings.....	9,000.00		52,600.00	52,500.00	2.687
240	Fire apparatus, purchase of....			4,000.00	4,000.00	.205
241	Fire apparatus, repair of....	2,000.00	3,000.00		3,000.00	.154
242	Fire-alarm systems, purchase of.....					
242a	Fire-alarm systems, repair of.....	300.00	300.00		300.00	.015
243	Sewage, disposal of.....	15,700.00		30,000.00	30,000.00	1.535
243a	Expenses incident thereto....	6,000.00	9,000.00		9,000.00	.461
243b	Fuel for incinerators.....	6,000.00				
243c	Incinerators, purchase of....	1,000.00	1,500.00		1,500.00	.077
244	Toilet paper.....	5,500.00	5,500.00		5,500.00	.281
245	Water systems, repair of....	23,000.00	25,000.00		25,000.00	1.279
246	Sewer systems, repair of....	10,000.00	14,000.00		14,000.00	.716
247	Plumbing within buildings, repair of.....	22,000.00	26,000.00		26,000.00	1.331
248	Employees.....	76,300.00	76,000.00		76,000.00	3.889
	Total.....	281,000.00	198,300.00	184,600.00	382,900.00	39.136

Item W. & S. 237, procuring water (water systems).

[Estimate, fiscal year 1919, \$517,211.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$438,111.00	\$438,111.00	.....	\$79,100.00	\$79,100.00	\$517,211.00
Appropriated fiscal year 1918.....	8,200.00	8,200.00	8,200.00
Expended fiscal year 1917.....	275,952.57	275,952.57	.....	95,000.00	95,000.00	370,952.57

REMARKS.

The following is a list of projects for the fiscal year 1919:

Fort H. G. Wright, N. Y., development of a new fresh-water supply.....	\$90,000
Fort Keogh, Mont., material and labor of sinking and casing two 4-inch wells.....	6,000
Fort McDowell, Cal., replacing 4,000 feet galvanized-iron pipe to connect west and east garrison.....	2,100
Fort McKinley, Me., increasing the present water supply system and thoroughly overhauling present system.....	8,658
Fort Niagara, N. Y., water purification plant.....	12,000
Fort Rosecrans, Cal., new water supply for this post. Present source outside of proposed lines of land defense.....	30,000
Fort Sill, Okla., construction of a pump pit; additional pump and electric motor; razing old pump house, etc.....	37,800
Fort Slocum, N. Y., installing auxiliary water main of 6-inch cast-iron pipe. Present supply through an underwater main.....	13,956
War College, concrete trench, with necessary iron covers, etc., to contain the main 8-inch water service pipe.....	3,600
Alcatraz, Cal., drilling of tubular well, 400 feet.....	15,687
Fort McKinley, Me.:	
Improving well system.....	18,000
Development of a new water supply.....	200,310
Total	438,111

Supplies.—The supplies to be purchased under this item consist of boilers, piping, fittings, and all material required for the construction of water system, reservoirs, trestles, wells, etc.

Services.—The services to be procured consist of the hire of labor, etc., job and contract services for the construction of water systems, reservoirs, trestles, sinking artesian wells, etc., and such other personal and nonpersonal services as may be necessary.

United States.—No estimates were submitted for this purpose for the United States for the fiscal year 1918, on account of the necessity of keeping the total under the estimate within the amount approved by the Secretary of War.

Philippine Islands.—This estimate is for \$79,100 for procuring water submitted by the department authorities for the fiscal year 1919. It is \$70,900 more than estimated for 1918.

The increased amount estimated for is explained as follows:

Procuring water (water systems).

Camp McGrath.—For replacing galvanized-iron water mains, supplies, \$4,000; services, \$1,800. Garrison, Second Battalion, Thirty-first Infantry, and Third Battalion, Philippine Scouts. The water mains at this post are of galvanized iron and have been in the ground so long that they are beginning to rust out. It is the intention to replace these mains with cast-iron pipe.

Camp Stotsenburg.—For replacing galvanized-iron mains and extending water system, supplies, \$4,000; services, \$1,800. Garrison, Ninth Cavalry and Second

Field Artillery. This sum will be required to replace certain galvanized-iron mains that are beginning to rust and for extensions to the water systems made necessary to provide for the increase in garrison.

Fort Mills.—For driving of wells and connecting same with post water system, supplies, \$20,000; services \$10,000. Garrison, Company A, Third Engineers; First Company, Second Aero Squadron; Ninth band; and 17 companies Coast Artillery Corps; Thirteenth Infantry; Fifth and Eleventh Battalions Philippine Scouts. The water supply of Fort Mills will barely suffice for the present garrison and it will be necessary to continue the driving of wells and connecting them by mains to the present system to furnish sufficient water for the increased garrison; also to increase, if possible, the normal supply for all purposes. For the extension of water mains, supplies, \$7,000; services, \$3,000. The sum above stated is required for the extension of water mains and enlargements so as to provide fire protection for buildings on the mine level and barrio of San Jose; also all storehouse and wharves on the water front.

Fort William McKinley.—For remodeling water system, supplies, \$5,000; services, \$2,500. Garrison, Field Hospital No. 4; Company B, Third Engineers; Third Field Battalion, Thirty-first Infantry; Ambulance Company No. 4; Signal Corps; Fifteenth Cavalry; Eighth Infantry; headquarters Third Battalion and Thirty-first Infantry; casuals. The increase in garrison will necessitate the remodeling of the water system, which is now under way, by which the water for all latrine purposes will be furnished from the river water system, thereby reducing the consumption of well water so that the present system of wells will furnish sufficient water for all cooking and drinking purposes. The river water system is now being developed, and the funds asked for will be required to complete the project.

Ludlow Barracks.—For remodeling water system, supplies, \$7,000; services, \$3,000. Garrison, Sixth and Eighth Battalions, Philippine Scouts. The present water supply at Ludlow Barracks is obtained from the Mituan River, a highly contaminated stream, and is pumped to a steel tank at the post, a great elevation above the river. The plant is operated by steam, all the pumping appurtenances being of a very uneconomical type. It is the intention to remodel the system so as to take advantage of the falls in the river that exist in the post, install modern and economical pumping machinery; also to divide the system so that the water consumed in the portion of the post at the low elevation will not be pumped to the tank on the hill, but to a tank that will be constructed at sufficient elevation to supply the lower part of the garrison. The price stated includes all mains and other work incident to this modification.

Item W. & S. 257a, purchase of water.

[Estimate fiscal year 1919, \$7,778,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$7,740,000.00	.....	\$7,740,000.00	\$38,000.00	.....	\$38,000.00	\$7,778,000.00
Appropriated, fiscal year 1918.....	262,858.75	.....	262,858.75	33,000.00	.....	33,000.00	295,858.75
Expended, fiscal year 1917.....	302,835.75	.....	302,835.75	38,000.00	.....	38,000.00	340,835.75

REMARKS.

Services.—The services to be procured under this item are of class 1, non-personal. They are for current requirements only and are required to cover payment for water for military purposes, for recruiting stations, storehouses, etc.

United States.—The amount of the estimate is approximately \$7,437,164.25 more than the cost for 1917, and about \$7,473,141.25 more than the apportionment for 1918. The increase is due to the increase in the Regular Army, the mustering in to the Federal service of the National Guard, and for the National Army. This estimate is based upon the estimate for 1918 plus a small increase for labor and material, and is as follows:

For stations other than for cantonments.....	\$430, 000
For cantonments.....	7, 310, 000
Total.....	7, 740, 000

Philippine Islands.—The amount of the estimate is \$5,000 more than submitted by the department authorities for the fiscal year 1918. It is the same amount as that expended for the fiscal year 1917. No explanation is given as to this increase.

Item W. & S. 237b, sterilizers and filters, purchase and repair.

[Estimate fiscal year 1919, \$540,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$540, 000. 00	.....	\$540, 000. 00	.....	.....	.....	\$540, 000. 00
Appropriated, fiscal year 1918.....	1, 676. 58	\$15, 099. 04	16, 765. 62	.....	.....	.....	16, 765. 62
Expended, fiscal year 1917.....	6, 113. 19	55, 018. 71	61, 131. 90	.....	.....	.....	61, 131. 90

REMARKS.

Supplies.—Under this item are procured water bags, sterilizers with ropes and covers attached; also hypochlorite of lime necessary to properly purify the water contained in these bags. In addition if the purchase of any filters or sterilizers are found necessary, the funds are authorized for this item.

United States.—The amount of the estimate is about \$478,868.10 more than the cost for 1917, and about \$523,234.38 greater than the apportionment for 1918. The increase is due to the increase in the Regular Army, the mustering into the Federal service of the National Guard, and for the National Army. A great many bags have been procured and used and it will be necessary to replace many of them and repair others during the fiscal year 1919. The item provides for both purchase and repair. This estimate is based upon the estimate for 1918 plus a small increase for labor and material and is as follows:

For stations other than for cantonments.....	\$30, 000
For cantonments.....	510, 000
Total.....	540, 000

Philippine Islands.—No estimate.

Item W. & S. 238, introducing water to buildings.

[Estimate fiscal year 1919, \$117,957.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....		\$98,957.00	\$98,957.00		\$19,000.30	\$19,000.00	\$117,957.00
Appropriated, fiscal year 1918.....		425,583.75	425,583.75		15,000.00	15,000.00	440,583.75
Expended, fiscal year 1917.....		24,989.34	24,989.34		30,000.00	30,000.00	54,989.34

REMARKS.

The following is a list of projects for the fiscal year 1919:

Fort Casey, Wash., extension of infiltration gallery, construction of a filter house and 1,000,000-gallon reservoir.....	\$62,082
Madison Barracks, N. Y., material and labor for extension of water mains for the fire protection of stables, etc.....	983
Philadelphia depot, automatic sprinklers system to be installed in building used for manufacture of uniforms, etc.....	20,250
Presidio of Monterey, installation of two fire hydrants at new forage warehouse.....	1,713
Fort Ruger, Hawaii, construction of a water supply for new mortar battery and 4.72-inch battery.....	1,695
Fort Sill, Okla., replacement of the old 3-inch wrought-iron main by 3,620 feet of 6-inch, 1,800 feet of 4-inch, and 8 fire hydrants, etc....	12,234
Total.....	98,957

Supplies.—The supplies to be purchased under this item consist of pipe, fittings, etc., and such other class “D” articles as may be required in the construction of water-distributing systems.

Services.—The services to be procured consist of the hire of laborers, job and contractor services, and such other personal and nonpersonal as may be required in the construction of water-distributing systems.

United States.—No amount was estimated for under this item for 1918 in order to keep within the amount approved by the Secretary of War. Therefore, the amount as stated for the fiscal year 1918, \$425,583.75, was transferred from other items of the appropriation. The amount of the estimate is about \$73,967.66 more than the cost for the fiscal year 1917, and approximately \$326,626.75 less than appropriated for the fiscal year 1918.

Philippine Islands.—The amount estimated for is the same as that submitted by the department authorities. It is \$4,000 more than was estimated for during the fiscal year 1918 and \$11,000 less than the amount expended for the fiscal year 1917. The amount estimated for is required as follows:

For introducing water to buildings constructed during the year, also to buildings that were not provided originally with water connections, at all posts in the Philippine Department, supplies, \$13,000; services, \$6,000. This does not include the sum asked for in other projects that are included in a lump-sum appropriation for a special installation.

Item W. & S. 238a—Fuel for pumping plants.

[Estimate, fiscal year 1919, \$1,523,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$1,523,000.00	.....	\$1,523,000.00	.....	.....	.....	\$1,523,000.00
Appropriated, fiscal year 1918....	137,048.13	.....	137,048.13	\$48,000.00	.....	\$48,000.00	185,048.13
Expended, fiscal year 1917.....	82,134.94	.....	82,134.94	.....	.....	.....	82,134.94

REMARKS.

Supplies.—The supplies to be procured under this item are class "A," and will be required for purchase of fuel for pumping plants.

United States.—The amount of the estimate is about \$1,440,865.06 more than the cost for 1917 and about \$1,385,951.87 more than the apportionment for 1918. The increase under this item is due to the increase in the Regular Army, the mustering into the Federal service of the National Guard, and for the National Army. The estimate is as follows:

For stations other than for cantonments.....	\$23,000
For cantonments.....	1,500,000

Total	1,523,000
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Philippine Islands.—No estimate is submitted for the fiscal year 1919.

Item W. & S. 239, installation and extension of plumbing within buildings.

[Estimate fiscal year 1919, \$56,028.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$3,528.00	\$3,528.00	.....	\$52,500.00	\$52,500.00	\$56,028.00
Appropriated, fiscal year 1918.....	309,150.00	309,150.00	.....	9,000.00	9,000.00	318,150.00
Expended, fiscal year 1917.....	80,434.68	80,434.68	.....	30,000.00	30,000.00	111,434.68

REMARKS.

Services.—The services procured under this item are by contract or hire, as may be deemed necessary for the placing of plumbing in new buildings. The above amount includes the installation of 24 urinals in barracks Nos. 45, 45A, 46, 46A, at Fort H. G. Wright, N. Y., amounting to \$2,487.

United States.—The reason for the large decrease estimated for in connection with the cost for 1917 and the amount appropriated for the fiscal year 1918 is due to the fact that practically no new construction under the appropriation "Barracks and quarters" is contemplated for the fiscal year 1919.

Philippine Islands.—The amount of the estimate is the same as that submitted by the department authorities. The amount is \$43,000 more than the estimate submitted for the fiscal year 1918 and \$22,500 more than the amount expended for the fiscal year 1917. The amount estimated is required for the following works:

For installing plumbing fixtures in buildings constructed during the year, also in buildings that were not provided originally with plumbing facilities, at all

posts in the Philippine Department, supplies, \$8,000; services, \$4,000. This does not include the sums asked for in other projects that are included in a lump-sum appropriation for a special installation.

Camp Stotsenburg.—For installation of plumbing and sanitary system, supplies, \$25,000; services, \$11,000. Garrison: Ninth Cavalry, Second Field Artillery. The present regimental Cavalry post has no sewer system, the dry-earth system being used. For sanitary reasons it is necessary to install plumbing and sanitary systems at all buildings in the Cavalry garrison, as this is one of the most important stations in the Army.

Regan Barracks.—For completing sanitary plumbing installations, supplies, \$3,000; services, \$1,500. Garrison: Seventh Battalion, Philippine Scouts. For the completion of installing sanitary plumbing in the remainder of the buildings at Regan Barracks not already provided therewith.

Item W. & S. 240, purchase of fire apparatus.

[Estimate fiscal year 1919, \$59,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$55,000.00	.....	\$55,000.00	.....	\$4,000.00	\$4,000.00	\$59,000.00
Appropriated, fiscal year 1918.....	.....	\$15,625.00	15,625.00	.....	.....	.....	15,625.00
Expended, fiscal year 1917.....	.....	56,430.31	56,430.31	.....	10,000.00	10,000.00	66,430.31

REMARKS.

Supplies.—The supplies under this item consist of gasoline and chemical fire engines, fire hose, ladders, axes, extinguishers, hose carts, and other fire extinguishing apparatus.

United States.—The amount estimated for is about \$1,430.31 less than the cost of 1917, and approximately \$39,375 greater than the apportionment for 1918. The amount estimated for is based upon the amount appropriated for 1918, allowing slight increases for labor and material. The estimate is as follows:

For stations other than for cantonments.....	\$30,000
For cantonments.....	25,000
Total.....	55,000

The increase of 1919 over 1918 is due to the increase of the Regular Army and the calling in to the service of the National Guard and the National Army.

Philippine Islands.—The estimate is the same as that submitted by the department authorities and is \$6,000 less than the amount expended for the fiscal year 1917. No estimate was submitted for the fiscal year 1918. The amount estimated for will be required for all posts in the Philippine Department, and is larger than usual for the reason that no funds were estimated for or appropriated for the fiscal year 1918.

ARMY APPROPRIATION BILL, 1919.

W. & S. item 241—Repair of fire apparatus.

[Estimate, fiscal year 1919, \$353,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$350,000.00	.....	\$350,000.00	\$3,000.00	.....	\$3,000.00	\$353,000.00
Appropriated, fiscal year 1918.....	5,000.00	.....	5,000.00	2,000.00	.....	2,000.00	7,000.00
Expended, fiscal year 1917.....	6,410.97	.....	6,410.97	2,000.00	.....	2,000.00	8,410.97

REMARKS.

Supplies.—The supplies under this item consist of hose, buckets, axes, and all material and parts required to replace or make repairs to fire extinguishing apparatus.

Services.—Either job or contract services are procured under this item, as may be deemed to the best interests of the Government, for repairs to the apparatus.

United States.—The amount estimated for is about \$343,589.02 more than the cost for 1917 and about \$345,000 greater than the apportionment for 1918. This increase is due to the calling in to the service of the National Guard, National Army, and increase of the Regular Army. It is believed that the amount estimated for will be required under this item. The estimate is as follows:

For stations other than for cantonments.....	\$50,000
For cantonments.....	300,000

Total	350,000
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Philippine Islands.—The estimate is the same as that submitted by the department authorities. It is \$1,000 more than the amount appropriated for the fiscal year 1918 and is required for current repairs to fire apparatus for all posts in the Philippine department.

W. & S. item 242—Purchase of fire-alarm system.

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	.....	.....	.....	.....	.....	.....	.....
Appropriated, fiscal year 1918.....	.....	.....	.....	.....	.....	.....	.....
Expended, fiscal year 1917.....	\$427.05	.....	\$427.05	.....	.....	.....	\$427.05

REMARKS.

United States.—No estimate is submitted under this item for the United States for the fiscal year 1919.

Philippine Islands.—No estimate is submitted for this item for the fiscal year 1919.

W. & S. item 242-a—Fire-alarm systems, repair of.

[Estimate, fiscal year 1919, \$1,800.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$1,500.00	.....	\$1,500.00	\$300.00	.....	\$300.00	\$1,800.00
Appropriated, fiscal year 1918..	675.00	.....	675.00	300.00	.....	300.00	975.00
Expended, fiscal year 1917.....	445.96	.....	445.96	2,000.00	.....	2,000.00	2,445.96

REMARKS.

Supplies.—The supplies procured under this item consist of wire, batteries, bells, and annunciators, etc., required in the repair of fire-alarm system.

Services.—The services to be procured consist of either job or contract, as may be considered to the best interests of the Government.

United States.—The estimate is approximately \$1,054 more than the cost for 1917 and \$875 greater than the apportionment for the fiscal year 1918. The increase is due to the calling into the service of the National Guard, National Army, and the increase in the Regular Army.

Philippine Islands.—The estimate is the same as that submitted by the department authorities, and is for the same amount as appropriated for the fiscal year 1918. It is \$1,700 less than the amount expended for the fiscal year 1917. The amount estimated for is for repairs to fire-alarm system at all posts in the Philippine department.

W. & S. Item 243—Sewage, disposal of.

[Estimate, fiscal year 1919, \$84,550.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$54,550.00	\$54,550.00	.....	\$30,000	\$30,000	\$84,550.00
Appropriated, fiscal year 1918.....	196,675.00	196,675.00	.....	15,700	15,700	212,575.00
Expended, fiscal year 1917.....	139,953.43	139,953.43	.....	32,000	32,000	171,953.43

REMARKS.

The following is a list of projects for the fiscal year, 1919:

<i>Fort Caswell, N. C.</i> —Labor and material to install approximately 2,050 feet sewer	\$1,980
<i>Fort Ethan Allen, Vt.</i> —Construction of several sewer-pipe lines and enlargement of others.....	16,224
<i>Fort Gaines, Ala.</i> —Sewer system for this post. Necessary if post is re-garrisoned.....	15,000
<i>Letterman General Hospital.</i> —Putting in main sewer and installing six manholes.....	2,906
<i>Fort McDowell, Cal.</i> —Construction of an incinerator.....	8,250
<i>Fort McPherson, Ga.</i> —Putting in 6-inch sewer-pipe line for buildings Nos. 23 and 67.....	2,055
<i>Fort Moultrie, S. C.</i> —Extensions and alterations to post-sewer system..	2,118
<i>Fort Myer, Va.</i> —Construction of a sewer and septic tank for toilet buildings Nos. 83 (stable guardhouse, Artillery) and No. 96 (stable guardhouse, Artillery) ; sewer in front of Cavalry stables to manhole No. 1	4,358
<i>Schofield, Barracks, H. T.</i> —Cover for septic tanks.....	4,358
<i>Fort Banks, Mass.</i> —Construction of trunk-sewer line.....	900
Total	55,591

Supplies.—The supplies to be procured under this item consists of pipe, fittings, etc., required in the construction of sewerage systems.

Services.—The service to be procured consist of either job or contract, required for the construction of sewerage systems, etc.

United States.—The amount estimated for is approximately \$85,403.43 less than the cost for the fiscal year 1917 and \$142,325 less than the apportionment for 1918. The increase is due to the calling out into the service of the National Guard, the National Army, and the increase in the Regular Army.

Philippine Islands.—The amount estimated for is the same as that submitted by the department authorities. It is \$2,000 less than the amount expended during the fiscal year 1917 and \$14,300 more than the amount appropriated for the fiscal year 1918. The funds are required for the following purposes:

Camp John Hay.—For construction of bacteriological tank: Supplies, \$3,000; services, \$1,500. Garrison: M, Twenty-seventh Infantry, second battalion, Philippine Scouts. For the construction of a bacteriological tank to provide for sewage purification on portions of the sewer system that are now discharging into dry creeks, thereby creating a nuisance.

Camp Stotsenburg.—For construction of sewer system and bacteriological tanks: Supplies, \$12,000; services, \$6,000. Garrison: Ninth Cavalry, Second Field Artillery. As stated under item 239, there is no sewer system for the Cavalry garrison at this post, and the funds asked for are required for and include the construction of a sewer system with the necessary bacteriological tank, as all sewage will have to be treated, for the reason that there is no running stream into which it can be discharged.

Pettit Barracks.—For rebuilding portion of sewer system: Supplies, \$2,000; services, \$1,000. Garrison: Fourth Battalion, Philippine Scouts. The present sewer system in a portion of the post will require rebuilding.

Regan Barracks.—For completing sewer system: Supplies, \$3,000; services, \$1,500. Garrison: Seventh Battalion, Philippine Scouts.

W. & S. item 243-a.—Expenses incident thereto.

[Estimate, fiscal year 1919, \$27,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$18,000.00	.....	\$18,000.00	\$9,000.00	.....	\$9,000.00	\$27,000.00
Appropriated, fiscal year 1918.....	14,000.00	.....	14,000.00	6,000.00	.....	6,000.00	20,000.00
Expended, fiscal year 1917..	120,945.76	.....	120,945.76	9,719.00	.....	8,719.00	129,664.76

REMARKS.

United States.—The amount estimated for is for services only, and is about \$102,945.65 less than the cost for the fiscal year 1917 and \$4,000 greater than the amount appropriated for the fiscal year 1918. This increase is due to the calling into the Federal Service for the National Guard, National Army, and the increase of the Regular Army.

Philippine Islands.—The estimate is the same as that submitted by the department authorities. It is about the same as the cost for 1917 and is \$3,000 more than the amount appropriated for the fiscal year 1918.

W. & S. item 243-b—Fuel for incinerators.

[Estimate, fiscal year 1919, \$232,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$232,000.00	.....	\$232,000.00	.....	.....	.....	\$232,000.00
Appropriated, fiscal year 1918.....	27,000.00	.....	27,000.00	\$6,000.00	.....	\$6,000.00	33,000.00
Expended, fiscal year 1917.....	19,297.96	.....	19,297.96	.....	.....	.....	19,297.96

REMARKS.

Supplies.—The supplies to be procured under this item are class “A.”
United States.—The amount of the estimate is about \$212,702.04 more than the cost for the fiscal year 1917 and is \$205,000 greater than the apportionment for the fiscal year 1918. The increase is due to the calling into the Federal service of the National Guard, National Army, and the increase in the Regular Army. This estimate is based upon the estimate for 1918, plus a small increase for labor and material, and is as follows:

For stations other than for cantonments.....	\$32,000
For cantonments.....	200,000
Total.....	232,000

Philippine Islands.—No estimate is submitted according to this item for the fiscal year 1919. The amount appropriated for the fiscal year 1918 was \$6,000.

Item W. & S. 243c—Purchase of incinerators, repair.

[Estimate, fiscal year 1919, \$49,500.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$48,000.00	.....	\$48,000.00	\$1,500	.....	\$1,500	\$49,500.00
Appropriated, fiscal year 1918.....	1,062.50	.....	1,062.50	1,000	.....	1,000	2,062.50
Expended, fiscal year 1917.....	24,874.93	.....	24,874.93	1,500	.....	1,500	26,374.93

REMARKS.

Supplies.—The amount estimated for is required for the purchase of lumber, etc., for the manufacture of standard latrine boxes which are now being used in the place of incinerators, also for repairs to old incinerators as well as repairs to latrine boxes already constructed.
Services.—Under this item job or contract services are procured for repairs to incinerators, latrine boxes, etc.
United States.—The amount of the estimate is \$23,125.07 more than the cost for the fiscal year 1917 and is \$46,937.50 greater than the amount apportioned for the fiscal year 1918. The increase is due to the calling into the Federal service of the National Guard, National Army, and the increase in the Regular Army. This estimate is based upon the estimate for 1918 plus a slight increase for labor and material, and is as follows:

For stations other than for cantonments.....	\$2,500
For cantonments.....	45,500
Total.....	48,000

Philippine Islands.—The amount of the estimate is the same as that submitted by the department authorities. It is the same as the cost for 1917, and is \$500 more than the amount appropriated for the fiscal year 1918. The funds are required for the purchase and repair of incinerators at all posts in the Philippine Department.

W. & S. 244—Toilet paper.

[Estimate, fiscal year 1919, \$1,175,500.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$1,170,000.00	.....	\$1,170,000.00	\$5,500.00	.....	\$5,500.00	\$1,175,500.00
Appropriated, fiscal year 1918.....	54,500.00	.....	54,500.00	5,500.00	.....	5,500.00	60,000.00
Expended, fiscal year 1917.....	99,502.26	.....	99,502.26	5,000.00	.....	5,000.00	104,502.26

REMARKS.

Supplies.—The supplies under this item are Class “A.” The issue of same being governed by paragraph 1215, Army Regulations 1913, section 5.

United States.—The amount of this estimate is about \$1,070,497.74 more than the cost for 1917 and is \$1,115,500 greater than the apportionment for 1918. This increase is due to the calling into Federal service of the National Guard, National Army, and the increase in the Regular Army. This estimate is based upon the estimate for 1918, plus a slight increase for labor and material, and is as follows:

For stations other than for cantonments.....	\$65,000
For cantonments.....	1,105,000
Total	1,170,000

Philippine Islands.—The amount of the estimate is the same as that submitted by the department authorities and is the same as the amount appropriated for the fiscal year 1918. It is \$500 more than the cost for the fiscal year 1917.

W. & S. item 245—Water systems, repair of.

[Estimate, fiscal year 1919, \$1,445,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$1,420,000.00	.....	\$1,420,000.00	\$25,000.00	.....	\$25,000.00	\$1,445,000.00
Appropriated, fiscal year 1918.....	54,375.00	.....	54,375.00	23,000.00	.....	23,000.00	77,375.00
Expended, fiscal year 1917.....	179,868.52	.....	179,868.52	23,147.00	.....	23,147.00	203,015.52

REMARKS.

Supplies.—The supplies under this item consist of pipe, fittings, and all materials required for making repairs to water systems, as well as reservoirs, sterilizers, filters, etc.

Services.—The services procured under this item are both job and contracts, and are required for repair of water systems, sterilizers, etc.

United States.—The amount estimated for is about \$1,240,131.48 more than the cost for 1917 and is \$1,565,625 greater than the apportionment for 1918. The increase under this item is due to the calling into the Federal service the National Guards, the National Army, and the increase in the Regular Army. This estimate is based upon the estimate for 1918 plus a slight increase for labor and material, and is as follows:

For stations other than for cantonments.....	\$95, 000
For cantonments.....	1, 325, 000
Total.....	1, 420, 000

Philippine Islands.—The amount of the estimate is the same as that submitted by the department authorities. It is \$2,000 more than the amount appropriated for the fiscal year 1918 and is \$1,853 more than the cost for the fiscal year 1917. This is the minimum amount that will be required for current repairs to water systems at the several posts in the Philippine Department. The systems as originally installed in numerous cases consisted of galvanized-iron pipe, which, due to its age, is requiring increased funds yearly for their maintenance.

W. & S. item 246—Sewer systems, repair of.

[Estimate, fiscal year 1919, \$414,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$400, 000. 00	.....	\$400, 000. 00	\$14, 000. 00	.....	\$14, 000. 00	\$414, 000. 00
Appropriated, fiscal year 1918.....	18, 750. 00	.....	18, 750. 00	10, 000. 00	.....	10, 000. 00	28, 750. 00
Expended, fiscal year 1917.....	66, 273. 36	.....	66, 273. 36	9, 950. 00	.....	9, 950. 00	76, 223. 36

REMARKS.

Supplies.—The supplies procured under this item consist of pipe, fittings, and all material required to make repairs to sewerage systems and purification plants.

Services.—The services to be procured under this item are obtained by contract, hire, and job for making repairs to sewerage systems, etc.

United States.—The estimate is about \$333,726.64 greater than the cost for 1917 and about \$381,250 greater than the apportionment for 1918. The increase is due to the calling into the Federal service the National Guard, National Army, and the increase in the Regular Army. This estimate is based upon the estimate for 1918 plus a slight increase for material and labor, and is as follows:

For stations other than for cantonments.....	\$35, 000
For cantonments.....	365, 000
Total.....	400, 000

Philippine Islands.—The estimate is the same as that submitted by the department authorities. It is \$4,000 more than the amount appropriated for the fiscal year 1918 and \$4,050 more than the cost for the fiscal year 1917. The funds are required for repair of all sewer systems in the Philippine Department. No explanation is given for the increased amount estimated for.

W. & S. item 247—Plumbing within buildings, repair of.
[Estimate, fiscal year 1919, \$786,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$760,000.00	.....	\$760,000.00	\$76,000.00	.....	\$76,000.00	\$786,000.00
Appropriated, fiscal year 1918.....	67,500.00	.....	67,500.00	22,000.00	.....	22,000.00	89,500.00
Expended, fiscal year 1917.....	75,585.37	.....	75,585.37	20,334.00	.....	20,334.00	95,919.37

REMARKS.

Supplies.—The supplies under this item consist of pipe, fittings, and material required for making repairs to plumbing systems within buildings.

Services.—The services procured under this item are both job and contract and required for repairs to plumbing systems within buildings.

United States.—The amount estimated for is about \$684,414.55 more than the cost for 1917 and is \$692,500 greater than the apportionment for 1918. The increase is due to the calling into the Federal service the National Guard, National Army, and the increase in the Regular Army. This estimate is based upon the estimate for 1918, plus a slight increase for material and labor, and is as follows:

For stations other than for cantonments..... \$120,000

For cantonments 640,000

Total..... 760,000

Philippine Islands.—The estimate is the same as that submitted by the department authorities. It is \$4,000 more than was appropriated for the fiscal year 1918. and is \$5,666 more than the cost for the fiscal year 1917. No explanation is given for the increased amount estimated for. The funds are required for plumbing repairs within buildings at all points in the Philippine Department.

W. & S. item 248—Employees.
[Estimate, fiscal year 1919, \$4,576,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$4,500,000.00	.....	\$4,500,000.00	\$76,000.00	.....	\$76,000.00	\$4,576,000.00
Appropriated, fiscal year 1918.....	227,350.00	.....	227,350.00	76,300.00	.....	76,300.00	303,650.00
Expended, fiscal year 1917.....	306,760.80	.....	306,760.80	76,000.00	.....	76,000.00	382,760.80

REMARKS.

Services.—The services required under this item are for employees in connection with pumping plants, water systems, sewerage systems, plumbing, etc.

United States.—Under this item are paid the salaries and wages of engineers, firemen, plumbers, and others employed in connection with the various systems. The amount estimated for at permanent posts is \$250,000. This is a slight increase over the estimate for 1918 which was \$227,350. Due to the fact of increase in the cost of material and labor, the amount estimated for at cantonments is \$4,250,000, making a grand total for the United States of \$4,500,000. The estimate for cantonments is based upon one-half the per capita cost for 1918 multiplied by the number of men in the various cantonments.

Philippine Islands.—The estimate is the same as that submitted by the department authorities. It is \$300 less than the amount appropriated for the fiscal year 1918. It is the same as the cost for the fiscal year 1917.

ARMY APPROPRIATION BILL, 1919.

COMMITTEE ON MILITARY AFFAIRS,
HOUSE OF REPRESENTATIVES,
January 14 and 15, 1918.

STATEMENT OF MAJ. GEN. HENRY G. SHARPE, QUARTERMASTER GENERAL, ACCOMPANIED BY BRIG. GEN. I. W. LITTELL, COL. H. J. HIRSCH, COL. J. P. WOOD, MAJ. L. HARDEMANN, MAJ. R. C. MARSHALL, JR., MAJ. WONSON, CAPT. CHAS. P. DALY, QUARTERMASTER CORPS.

CLOTHING AND CAMP AND GARRISON EQUIPAGE.

The CHAIRMAN. The next item is "Clothing and camp and garrison equipage." I notice in the first place, General, that the supplemental estimate is larger than the original estimate under this item. Your original estimate was for \$883,172,148.36, and then you come in with a supplemental estimate of \$949,342,872.27, making a total of \$1,832,515,020.63. I would like to have that matter explained first.

Gen. SHARPE. The reason for that is that the cost per capita is figured the same in both the original and the supplemental estimates.

The CHAIRMAN. What is the cost per capita?

Capt. DALY. That is \$457.

Gen. SHARPE. There was a reserve included in the supplemental estimate, which is not in the original estimate.

The CHAIRMAN. How much of the supplemental estimate is for reserve?

Capt. DALY. \$365,000,000.

The CHAIRMAN. How do you account for the difference between \$365,000,000 and \$949,000,000?

Capt. DALY. The first estimate of \$883,172,148.36 was based on an army of 1,612,245 men. The supplemental estimate is based on an army of 3,000,000 men, for supplies that would take over six months to obtain.

The CHAIRMAN. So that the real reason for this supplemental estimate is to provide for an army of 3,000,000 men?

Gen. SHARPE. Yes, sir.

The CHAIRMAN. In this item, as in the others, I will ask you to put in the record a detailed statement showing what is embraced in each item, with an explanation of each item, and also a statement showing how much you have expended of the appropriation you had at the last session of Congress.

Capt. DALY. We have expended all of it, and we have a deficiency of \$300,000,000 now.

The CHAIRMAN. You have already spent all of the \$610,000,000, and you have a deficiency of how much?

Capt. DALY. We have a deficiency of about \$310,000,000. We have existing contract obligations that exceed the appropriation to that extent.

The CHAIRMAN. So that you will have to have a deficiency appropriation now of \$310,000,000?

Capt. DALY. Yes; that will make the 1918 appropriation practically what we estimated for when we appeared before the Committee on Appropriations.

The CHAIRMAN. That is practically \$1,000,000,000, including the appropriation you got at the last session and the deficiency you will ask for. How many men will that actually equip? What sized army will that amount of money actually equip?

Capt. DALY. You mean the 1918 estimate and the deficiency?

The CHAIRMAN. Yes.

Capt. DALY. I can not answer that offhand.

The CHAIRMAN. You can put that in the record?

Capt. DALY. Yes, sir. It is practically 2,033,345 men. The per capita cost is practically the same, \$547.

NOTE.—The above figure (2,033,345 men) is correct.

The CHAIRMAN. Then, if that amount of money is expended, you ought to have on hand enough clothing and equipment now for an army of 2,000,000.

Capt. DALY. There are a good many of the contracts under that appropriation for cloth and materials that extend to December, 1918, for deliveries.

The CHAIRMAN. I understand that, but what I am trying to get at is whether the amount of money that Congress gave you at the last session for clothing and equipment, together with the deficiency which, as I understand you, you expect to ask the Committee on Appropriations for right away, will equip that sized army when the money is finally expended?

Capt. DALY. Practically, yes, when it is finally completed.

The CHAIRMAN. There has been on this item a great deal of criticism throughout the country as to a shortage, especially of clothing, to be furnished to the soldiers when they were to go to camp. What was that condition when the first appropriation was made?

Gen. SHARPE. Mr. Chairman, is this an executive session of the committee?

The CHAIRMAN. Oh, yes.

Gen. SHARPE. I will explain the whole matter, and then the committee can determine what shall be omitted when the hearings are printed.

The CHAIRMAN. Yes.

Gen. SHARPE. The conditions were such that in February of this past year, after consultation with the Secretary of War, it was thought necessary to advertise for the supplies for the Army for this present fiscal year. The advertisement was inserted in the papers under date of February 4.

The appropriation bill for this year did not pass, and about the 5th or 6th of March, after the failure of the appropriation bill to pass, with the approval of the Secretary of War, orders were placed at once for the delivery of the stores for an army of 160,000 men—the Regular Army, which was contemplated to be in service in 1918—for delivery as soon after the first of the fiscal year as the articles could be obtained. Conditions continued to grow more alarming, and a little later in that month I obtained authority from the Secretary of War to purchase clothing sufficient for 500,000 men, in addition to the 160,000 which had already been granted, to provide for the Regular Army and the National Guard.

Mr. ANTHONY. What year was that?

Gen. SHARPE. That was 1917. On the 13th of March, in reply to a question which was asked of the department, when we would be able to handle supplies for 1,000,000 men, it was stated that we could take care of the National Guard and the Regular Army by the 31st of July, but that we would not be able to take care of an additional 500,000 men until the 31st of December.

The same question came up again, and was replied to in the same way on the 2d of April, and again on the 16th of April.

Then the urgency for calling into the service a great number of National Guard organizations was pressing, and we made the statement that we could not take care of any additional troops to the ones we already contemplated, and in that statement we gave practically the same résumé which I have just repeated to you. That was transmitted to every one of the department commanders along about the 23d of April, I think.

At that time, along in April, the problem was given to us of providing for 1,078,000. We were working on that problem. It contemplated the National Guard, the Regular Army, and the National Army. There was no intention then of sending any troops abroad until next year.

Mr. KAHN. That is, you mean this year?

Gen. SHARPE. Yes, sir.

The CHAIRMAN. In other words, there was no intention of sending any troops abroad until at least 12 months after the declaration of war?

Gen. SHARPE. Twelve months after that time. Our arrangements were made with that in view.

MARCH 13, 1917.

Memorandum for the Chief of Staff.

1. Clothing and equipment necessary for 1,000,000 men can, under existing conditions, be procured within 10 months with the understanding that it might be necessary to purchase some blankets which do not conform to existing specifications, but which would closely approximate standard quality and color.

2. It should also be stated that it would not be possible to secure sufficient canvas at once to shelter the men, and it would be necessary to put a large portion of them in cantonments. As now equipped, it requires from 60 to 90 days in which to make delivery of canvas in sufficiently large quantities. The entire quantity required for the million men, however, would be available within the limit of 10 months above specified.

3. The foregoing statement is based on the assumption that the funds will be appropriated and available to cover the cost of all the supplies required for the million men, at the outset, thus enabling the department to at once place the orders for the supplies and in the quantities required, thus keeping the factories in continuous operation.

HENRY G. SHARPE,
Quartermaster General.

APRIL 2, 1917.

1. The present Regular Army and 68,000 men of the National Guard can be practically supplied with clothing and equipage from supplies on hand and deliveries being made daily (in addition to that which the National Guard already has), including tentage. The supplies for the National Guard now being called into the service will practically be ready for it when required.

2. The Quartermaster Corps believes that it will be able to maintain the supply of the above number of troops after their initial equipment.

3. It will be noted that 89,000 (instead of 68,000) of the National Guard have been called into the service, but the Quartermaster Corps is making every effort and believes that it will be successful in equipping that number also.

4. The difference between the present total strength of the Regular Army plus the above 68,000 men and 500,000 men will be equipped by the end of July from daily deliveries under contracts already made.

5. It will require four months to complete the equipment of the Regular Army and National Guard, both at war strength (approximately 500,000), with regulation articles except tentage. A slight reduction in this time may be made by using certain commercial articles.

6. To equip another 500,000 men will require five months in addition to the preceding four months, provided that all of the orders for the second 500,000 men could be placed at the same time as the orders for the equipment of the first 500,000 men.

7. Animal transportation under the old tables of organizations can be now supplied for the Regular Army and the National Guards, the latter being at its maximum strength while on the border, i. e., 158,000 men. It is understood that new tables of organization have been prepared which increases the transportation, but those tables have not been furnished the Quartermaster General.

8. Considerable time would be saved in the work of the Quartermaster Corps in equipping the National Guard being called out, if the Quartermaster General could be notified simultaneously with The Adjutant General of the call to be made for additional troops.

9. To obtain supplies as quickly as possible the Quartermaster Corps has placed orders for delivery before July 31, with as many contractors as possible, and all it could do to expedite the delivery of a greater quantity for an additional number of men would be to increase the orders to each of the present contractors and to induce other firms and manufacturers which could not agree to deliver by July 31 to accept orders for a later date.

H. G. SHARPE,
Quartermaster General.

APRIL 16, 1917.

Memorandum for CHIEF OF STAFF:

It is understood that the "other plan" referred to is for this department to be prepared to equip 500,000 men by the end of July and 500,000 more by the 31st of December, with proper uniform and equipage, or to clothe and equip the first 500,000 by the middle of June with articles closely approximating standard articles, and the third 500,000 similarly by November 1.

It will not, in the opinion of this office, be practicable to properly clothe and equip this or any other number of men more than was provided for in the original plan.

QUARTERMASTER GENERAL.

OFFICE QUARTERMASTER GENERAL,
April 19, 1917.

THE ADJUTANT GENERAL OF THE ARMY:

1. With reference to paragraph (a) the question can be answered in the affirmative.

2. With reference to paragraph (b), the question would depend on where the men are to be mobilized for which the supplies are required.

3. During the month of March orders were placed for the delivery of clothing and equipage up to July 31 in sufficient quantities, except tentage, to equip an army of 500,000 men, including the National Guard and Regulars now in the service. These supplies are coming in daily, and the Regular Army and National Guard so far called in have been taken care of and are provided for.

and sufficient supplies will be coming in to take care of 25,000 additional men in April, 50,000 in May, 75,000 in June, and 100,000 in July, but it must be borne in mind that these supplies are being received from various factories scattered from the Atlantic to the Pacific coast, the bulk coming from the Eastern States.

4. Early in April orders were placed for clothing and equipage for an additional 500,000 men for delivery up to December 31, and assuming that the first 500,000 men are equipped by the end of July, the department will be able to clothe and equip 100,000 men monthly thereafter, with the exception of tentage.

5. Much time will be consumed even after the supplies are delivered in transporting them to the places where the troops will require them. Especially is this true if they are mobilized at points distant from the factories. Attention is invited to the fact that to take care of a great number of troops at once the demands on depots should be divided among the various supply depots which are now being stocked up to take care of certain territorial limits.

6. So far as transportation supplies are concerned, there is a sufficient quantity of wagons, ambulances, and harness now on hand to equip approximately 50,000 men immediately, in addition to the Regular Army and National Guard. By utilizing motor transportation in lieu of animal-drawn transportation an additional 100,000 men can be equipped by May 20, 1917.

7. Bids are now being invited for transportation supplies necessary to equip 500,000 men, and it is estimated that these supplies can be delivered in from 60 to 90 days after date of award. It can, therefore, be stated that the necessary transportation for any number of men that can be equipped and subsisted during the periods named in the above communication can also be supplied with the necessary transportation.

8. It should be borne in mind that the resolution of the Council of National Defense will, it is understood, prevent indefinitely the supply of cots, although it is not known to this office what effect the resolution will have on contracts made and guaranteed by bond from bidders.

HENRY G. SHARPE,
Quartermaster General.

APRIL 27, 1917.

From: The Adjutant General of the Army.

To: The Commanding General, Western Department, San Francisco, Cal.

Subject: Calling out of National Guard troops.

Referring to your telegram of April 13, 1917, recommending that all Coast Artillery, National Guard, including field officers of the States of Oregon and Washington, and the remainder of the National Guard in California, including all field officers, be called into the Federal service, I am directed by the Secretary of War to inform you confidentially that these National Guard troops can not be called out at the present time unless immediate requirements make it necessary, in view of the following conditions as reported by the Quartermaster General:

During the month of March orders were placed for the delivery of clothing and equipage up to July 31 in sufficient quantities, except tentage, to equip an army of 500,000 men, including the National Guard and Regulars now in the service. These supplies are coming in daily, and the Regular Army and National Guard so far called in have been taken care of and are provided for, and sufficient supplies will be coming in to take care of 25,000 additional men in April, 50,000 in May, 75,000 in June, and 100,000 in July, but it must be borne in mind that these supplies are being received from various factories scattered from the Atlantic to the Pacific coast, the bulk coming from the Eastern States.

Early in April orders were placed for clothing and equipage for an additional 500,000 men, for delivery up to December 31, and assuming that the first 500,000 men are equipped by the end of July, the department will be able to clothe and equip 100,000 men monthly thereafter, with the exception of tentage.

Much time will be consumed even after the supplies are delivered in transporting them to the places where troops will require them; especially is this true if they are mobilized at points distant from the factories. Attention is invited to the fact that to take care of a great number of troops at once, the demands on depots should be divided among the various supply depots which are now being stocked up to take care of certain territorial limits.

So far as transportation supplies are concerned there is a sufficient quantity of wagons, ambulances, and harness now on hand to equip approximately 50,000 men immediately in addition to the Regular Army and the National Guard. By utilizing motor transportation in lieu of animal-drawn transportation, an additional 100,000 men can be equipped by May 20, 1917.

Bids are now being invited for transportation supplies necessary to equip 500,000 men, and it is estimated that these supplies can be delivered in from 60 to 90 days after date of award. It can, therefore, be stated that the necessary transportation for any number of men that can be equipped and subsisted during the period named in the above communication can also be supplied with the necessary transportation.

It should be borne in mind that the resolution of the Council of National Defense will, it is understood, prevent indefinitely the supply of cots, although it is not known to this office what effect the resolution will have on contracts made and guaranteed by bond from bidders.

By order of the Secretary of War:

WM. M. CRUIKSHANK,
Adjutant General.

WAR DEPARTMENT,
OFFICE OF THE QUARTERMASTER GENERAL OF THE ARMY,
Washington, October 18, 1917.

Memorandum for the Chief of Staff:

1. With reference to the attached cablegram from Gen. Pershing, in which he states that the clothing on hand October 1 is 16,700 woolen breeches; 1,200 woolen coats; 4,200 service hats; 2,000 leggings, canvas; and 1,000 pairs woolen stockings, and that the clothing situation is critical, attention is invited to memorandum of this office of August 25, 1917 (Q. M. G. O., 111.03-CE Genl., 1918), in which it was shown that the shortage of clothing was due to three causes, as follows:

First. That arrangements were made to call the National Army before the date this department stated they could equip them.

Second. That shipments of troops abroad were made a year before it was the intention to begin such shipments, when the problem of supplying the troops was given to this department.

Third. That various special units not included in the original number estimated for were shipped abroad.

These are the facts, and no doubt the military situation demanded this; but according to the above cablegram from Gen. Pershing, the clothing situation is becoming critical on the other side, and the inability to provide clothing in case any further troops are called into the service in this country still further complicates the problem.

2. On October 12 a confidential letter was addressed to this office by The Adjutant General, giving the priority of the supply of woolen clothing to the various units to be shipped abroad and indicating the order in which these troops were to be equipped, and it was presumed that they were to be sent abroad in the same order. This provides, first, for a large number of aero squadrons and then for another division of troops, and reference is made to this letter in this connection because if additional troops are sent abroad with the reserve which must be given them, it will further complicate the clothing situation here, account of making a great shortage.

In repeated cablegrams, Gen. Pershing has urged necessity of sending labor troops over in order to enable him to make proper provisions for handling the supply of troops which he already has there. In the letter of October 12 above referred to, as far as the Quartermaster's Department is concerned, many of these labor troops are to be shipped last.

3. If it is not deemed advisable to discontinue the shipment of troops abroad, the necessity of providing adequate clothing for the upkeep of troops already abroad is imperative, and authority to make shipment for that purpose in preference to any other demands is requested.

Attention is invited to the attached statement, which shows all the shipments which have been made to the troops abroad, exclusive of the full allowance of equipment taken with them individually.

HENRY G. SHARPE,
Quartermaster General.

As you gentlemen recall, there was a change in those plans, and at the same time that the change in the plans for sending troops abroad was made the law of May 18, 1917, authorized the creation of a great many technical units. A great many of these technical units were shipped abroad with the troops.

The training camps were established and they drained us of our clothing. That made about 130,000 additional men to provide for, above the program which had been given to us.

In addition to that, because of the movement of troops abroad, there had to be transmitted with them six months' reserve supplies.

The date, as I have stated, when we could furnish the equipment for these men was December 31, 1917—that is, the original 1,000,000 men, 500,000 on July 31, and 100,000 monthly thereafter, making supplies for a full million men by the 31st of December, 1917.

It was necessary to call the National Army, in order to train them, before the 31st of December, and the date for that was fixed as September 1. We had these additional troops also to furnish with supplies, and, as I stated, also had to supply the troops shipped abroad.

Attention was called to the fact, along in July or August, that we would not be able to handle more than 100,000 men in September and probably 100,000 monthly thereafter.

But in order to have the men drilled, it was deemed necessary to order them into the cantonments on the dates they were ordered. The shipments of the troops abroad and the shipments of clothing there and the additional number of troops which were called out, of course, depleted the stock which we were to have on hand anticipatory of the mustering in of troops on the dates which had been set. It was also the understanding that these troops could go to the camps even if they had to go there and be drilled in their civilian uniforms, the same as was done in England.

We have tried to meet every one of these conditions, and on October 18 I submitted a memorandum stating how the problem had been complicated by these new changes made in it, the three changes, the shipment of troops abroad a year before it was expected, the calling of an additional number of technical units, making a good many over and above the number which we were to equip under our program. That was returned to me by an indorsement of The Adjutant General's Office of October 23, reading as follows:

[First indorsement.]

WAR DEPARTMENT,
ADJUTANT GENERAL'S OFFICE,
October 23, 1917.

To the Quartermaster General, with the information that the decision of the President to begin sending troops abroad at an earlier date than had been anticipated by him, and to call the increments of the National Army at an earlier date than he had recommended, has called upon his department to put forth very strenuous efforts, which efforts, however, have so far fairly well met the needs from day to day, and the Secretary is convinced that this same energy will meet all future calls made upon his department; that while the supply situation is so critical supplies will continue to be distributed in such manner that no one will suffer; that troops designated for over-seas service must be first equipped according to approved schedule of priority in equipment board; that Gen. Pershing's needs must be taken care of, but a large reserve will not be created in France at the expense of the men we now have under arms and who must be made comfortable; that as soon as the supply situation will allow

the following priority list will govern: Gen. Pershing's needs ahead of all others, with troops soon to join him second; National Army divisions in northern cantonments, third; other troops in northern places, fourth; National Army troops at southern camps, fifth; and other troops in southern camps last; that the supply situation will be kept in mind when further increments of the draft are under consideration.

By order of the Secretary of War:

PAUL GIDDINGS, *Adjutant General*.

That was signed by The Adjutant General, by order of the Secretary of War.

Mr. GORDON. What is the date of that, General?

Gen. SHARPE. The date of that is October 23.

The CHAIRMAN. Then, as I understand it, the first reason for the shortage is the change in the view of the War Department as to sending the troops to France. That is the first reason?

Gen. SHARPE. Yes, sir.

The CHAIRMAN. And that change was made when?

Gen. SHARPE. When Gen. Pershing's troops went over, some time in May or June.

The CHAIRMAN. Then the next most important reason was that the National Army or the drafted men were called into camps to be trained in civilian clothes when you knew you did not have the supplies necessary to equip them?

Gen. SHARPE. I would like to explain in that connection, Mr. Chairman, that England, the greatest country in the world for the production of cloth, had practically the same problem we had submitted to us, and she had the resources of this country to call upon to supplement her own efforts. We did not have that.

We had to depend upon ourselves. It took England a year to equip an army of a million men, and we have got ours——

The CHAIRMAN (interposing). You mean to equip and arm and clothe?

Gen. SHARPE. To clothe them.

The CHAIRMAN. It took England a year to clothe an army of a million men?

Gen. SHARPE. Yes, sir; that is the information we have. We have come near doing that now, and we were able to do it in a portion of the time that England took to do it, and I think that is a wonderful tribute to the business capacity and progressiveness of our business people.

The CHAIRMAN. Let me get one thing straight there. I understand that the drafted army was called into the service earlier than was first expected.

Gen. SHARPE. No, sir; not earlier than was expected. We said it could be done by December 31, and they said they must have it done by September 1.

The CHAIRMAN. You said it could not be done until December 1?

Gen. SHARPE. As far as the equipment was concerned.

The CHAIRMAN. They said it must be done by September 1?

Gen. SHARPE. Yes, sir.

Mr. MCKENZIE. I would like to ask to be put into the record a statement showing the number of men in these special and technical units that you have been called upon to equip.

The CHAIRMAN. I asked for that.

Gen. SHARPE. Here is a memorandum of July 21, which I submitted, which is a part of the résumé of what I have given you. It is a memorandum to the Chief of Staff. He asked for a statement in regard to the additional troops which we had sent over, in a memorandum dated July 20.

JULY 21, 1917.

Memorandum for the Chief of Staff:

1. Referring to memorandum dated July 20, there is submitted the following list showing the enlisted men comprising the special units that have been raised and uniformed that were not originally estimated for, i. e.:

Training camps	40,000
9 railway regiments, Engineers	10,000
1 forestry regiment, Engineers	1,167
6 months' reserve for 10 Engineer regiments	11,670
Aviation schools	1,460
5 telegraph battalions, E. R. C.	1,045
13 base hospitals	1,796
Ambulance Corps	4,000
Field hospitals and ambulance companies (64 each, about 60 per cent complete)	11,700
Ordnance, E. R. C.	333
Quartermaster, E. R. C.	2,500
6 months' reserve for first and second convoys	25,000
6 months reserve for marines	3,800
Total	130,154

2. In addition to the foregoing, it has been necessary to provide a considerable quantity of clothing for the equipment of reserve officers, especially those ordered for duty with troops abroad.

3. Attention in this connection is invited to statement made verbally in an interview with Gen. Bliss, Gen. Smith, and the undersigned on April 2, 1917, wherein it was stated that:

"Considering the stock on hand and orders so far placed, the equipment of the first 500,000 men (Regular Army and National Guard) could be completed by July 31, and that if orders were placed at once for supplies for an additional 500,000 men they could be equipped within five months from that date."

4. On April 16, 1917, in a memorandum of the General Staff it was stated:

"It will not be practicable to properly clothe and equip within the time previously allotted this or any other number of men more than that provided for in the original plan."

5. In an indorsement of The Adjutant General, dated April 19, 1917, the following statement was made:

"Early in April orders were placed for clothing and equipage for an additional 500,000 men for delivery up to December 31, and assuming that the first 500,000 men are equipped by the end of July the department will be able to clothe and equip 100,000 men monthly thereafter, with the exception of tentage.

HENRY G. SHARPE,
Quartermaster General.

Mr. MCKENZIE. What is the date of that?

Gen. SHARPE. It is dated July 21, I think.

Mr. MCKENZIE. There have been a great many technical units organized since that time—regiments of Engineers?

Gen. SHARPE. There were 10 regiments of Engineers in that. There have been others organized since that time.

Mr. MCKENZIE. There is the Twenty-third Regiment of Engineers now at Camp Meade.

Gen. SHARPE. Yes, sir. We also had the second training camp, and the increase of the Medical Corps, quite a considerable increase, and an additional increase of our own corps.

The CHAIRMAN. I asked you the other day to put in the record a full and complete statement of the total number of these special and technical units authorized by the act of May 18.

Gen. SHARPE. I understood that was for our corps only.

The CHAIRMAN. You furnish the supplies for them. Do they not have to give you the number of men they have, so that you know how many you will have to supply?

Gen. SHARPE. When they commence to organize only. We are notified of the organizations.

The CHAIRMAN. You can put in the record the number of special and technical units you have been asked to equip?

Gen. SHARPE. Yes, sir.

Mr. McKENZIE. Have you been asked, up to this time, to furnish uniforms for the meteorological unit of the aviation section?

Gen. SHARPE. I do not remember seeing that.

The CHAIRMAN. The question has been asked why you happen to furnish the supplies for the marines.

Gen. SHARPE. We have to do that when they are operating abroad. We clothe them and feed them whenever they are operating with the Army.

The CHAIRMAN. You do not class them as technical units of the Army?

Gen. SHARPE. No, sir; they are part of the regular establishment, and they are sometimes unexpectedly thrown upon us. That number of men we did not know about, of course.

The CHAIRMAN. Is the Army now furnished with sufficient clothing and equipment?

Gen. SHARPE. Maj. Hardeman can answer that better than I can.

The CHAIRMAN. If not, how much short is the Army now?

Maj. HARDEMAN. About 125,000 coats short, furnishing one per man. That was on the 1st of December.

Gen. SHARPE. That is the woolen coats, not the overcoats.

Mr. ANTHONY. Does that mean that there are 125,000 men at the camps that have not woolen coats?

Maj. HARDEMAN. Not now.

Mr. ANTHONY. That means that you are short that much in your reserve that you ought to have?

Maj. HARDEMAN. On the 26th of December there were 100,619 men short of coats, but we had sufficient in number, but not of proper sizes. That shortage has been made up since by shipping proper sizes in, and that was not exactly correct, because we found out afterwards that they were figuring on the final draft. It is probable that about 75,000 would have covered it.

The CHAIRMAN. About how many?

Maj. HARDEMAN. About 75,000 woolen coats required to give each man in each camp a woolen coat.

The CHAIRMAN. You mean 75,000 to each camp?

Maj. HARDEMAN. No.

The CHAIRMAN. In the whole Army?

Maj. HARDEMAN. Yes, sir. As far as we can find out from the reports we have received all that stuff was ordered at once.

The CHAIRMAN. In other words, I want you to put in the record the shortage on the latest date you have on each article of clothing that goes with a soldier's equipment.

Gen. SHARPE. We will get that as of to-day.
(The matter referred to is as follows:)

Statement of shortages reported at camps on Dec. 26, 27, and 28, 1917, and of conditions Jan. 19, 1918.

Camp.	Shortages reported.			Remarks.
	Over-coats.	Coats.	Breeches.	
Devens.....				No shortage originally reported; none reported since.
Upton.....				Do.
Dir.....	19	1,440		Reported equipped, telegram Jan. 9, 1918.
Meade.....	217	8,912	1,350	Reported on Jan. 1, 1918: 3,400 coats to be supplied Jan. 2, 1918, by Baltimore depot would complete equipment.
Lee.....		2,790		No further reports shortages. Shipments coats reported as follows: 10,010 Dec. 28, 755 Jan. 15, 440 Jan. 16, 1918.
Jackson.....				No shortage originally reported. On Jan. 1, 1918 reported a shortage of 500 breeches and 500 coats. On Jan. 17, 1918 reported shortage of 2,038 coats, with shipment of 600 coats on hand unopened. 5,000 shipped from New York, Jan. 3, 1918, probably not yet received. Sufficient cotton coats and a supply of flannel shirts are on hand to provide for comfort of men until woolen coats are received.
Gordon.....	1,838	7,900	1,838	Reported on Jan. 7, 1918, that on arrival of 10,005 coats shipped from New York, Jan. 5, command would be equipped. Sufficient cotton coats and a supply of flannel shirts are on hand to provide for comfort of men until woolen coats are received.
Sherman.....		1,150		Reported on Jan. 17, 1918, a shortage of 7,000 coats which had been purchased and were then en route. Sufficient cotton coats and a supply of flannel shirts are on hand to provide for comfort of men until woolen coats are received.
Custer.....	530	4,530		Reported on Jan. 18, 1918, shortage of 4,421 coats; 706 were shipped from Chicago Jan. 3; 421 on Jan. 10, and 1,500 on Jan. 19; New York was directed to ship 1,794 on Jan. 19, 1918, of sizes required. Delay in ordering was due to the fact that telegram of division commander first reported on Jan. 9 that 421 coats were required and on Jan. 18 wired that 4,421 were required. Sufficient cotton coats and flannel shirts are on hand to provide for comfort of men until woolen coats are received.
Grant.....		3,821	3,821	On Jan. 19, 1918, reported that 1,570 coats were expressed Jan. 14 from Chicago, 2,251 on Jan. 19, and that 1,371 will be expressed Jan. 21. On Jan. 17 reported no breeches needed. Sufficient cotton coats and a supply of flannel shirts are on hand to provide for comfort of men until woolen coats are received.
Taylor.....	111	1,086	1,086	On Jan. 17, 1918, reported that he was provided with breeches and overcoats and upon arrival 1,570 coats shipped Jan. 8 from Chicago, command would be equipped. Sufficient cotton coats and a supply of flannel shirts are on hand to provide for comfort of men until woolen coats are received.
Pike.....	774	5,868	2,459	On Jan. 17, 1918, reported sufficient overcoats and breeches, including those required for final increment of draft, on hand, and on arrival of 7,010 coats from New York would have sufficient to equip troops. Sufficient cotton coats and a supply of flannel shirts are on hand to provide for comfort of men until woolen coats are received.
Funston.....	38	9,600 1,077	126	On Jan. 17, 1918, reported still short 2,900 coats and on arrival of 5,000 shipped by New York there will be sufficient to equip command. Sufficient cotton coats and a supply of flannel shirts are on hand to provide for comfort of men until woolen coats are received.
Dodge.....	50	300		No report of present shortage received; 2,645 overcoats were shipped by New York Dec. 29, 1917; 5,515 coats shipped by New York Dec. 21, 1917; and 5,000 coats shipped Jan. 6, 1918.
Travis.....	268	6,632		On Jan. 17, 1918, depot quartermaster at Fort Sam Houston reported that a board of officers found shortage of 1,761 breeches, all of which he supplied and a shortage of 15,709 coats, of which the quartermaster had shipping advice of 14,240 on Jan. 11, 1918; 8,808 were shipped from New York on Jan. 10 and 12, 1918. The quartermaster was advised that in view of conflicting report of quantities and sizes needed, further report was to be submitted to the Quartermaster General on receipt of shipments then en route. In the meantime to issue additional flannel shirts and wool undershirts to wear with cotton coats until wool coats arrive. This camp, although it had large quantities of wool uniforms in storehouse, apparently preferred to wear the cotton until ordered by this office to issue the woolen.

Statement of shortages reported at camps on Dec. 26, 27, and 28, 1917, and of conditions Jan 19, 1918—Continued.

Camp.	Shortages reported.			Remarks.
	Over-coats.	Coats.	Breeches.	
Lewis.....				Did not report shortage in December. On Jan. 17, 1918, reported 500 breeches, 1,416 coats, and 908 overcoats short, and sufficient then en route to equip the division.
Greene.....				This camp is garrisoned by Regulars and is being equipped with 2 suits per man for duty abroad.
Wadsworth....	45	3,367	4,001	On Jan. 17, 1918, reported there was no shortage of overcoats and that issues of wool coats and breeches at the rate of 1 per man was completed Jan. 6, 1918.
Hancock.....		4,000	3,200	On Jan. 17, 1918, repeated his report of Jan. 3 that every man in the division had 1 overcoat, 1 pair breeches, and 1 coat.
McClellan.....		1,200	1,200	On Jan. 18, 1918, reported that every man had an overcoat, 1 wool coat, and 1 wool breeches.
Sevier.....		2,935	5,963	On Jan. 17, 1918, reported that when shipment of 4,000 uniforms now en route arrived, sufficient wool uniforms would be on hand to equip command. Sufficient cotton coats and a supply of flannel shirts are on hand to provide for comfort of men until woolen coats are received.
Wheeler.....		1,141	1,141	On Jan. 17, 1918, reported all men in camp equipped with 1 overcoat, 1 coat, and 1 breeches. This command is being equipped for duty abroad.
Sheridan.....				Did not report shortage in December. On Dec. 29, 1917, reported that 3,000 breeches and coats were required. On Jan. 20, 1918, reported that telegram of Dec. 29, 1917, was not based on correct understanding of situation and that when shipments en route arrived, would have sufficient to equip command. Sufficient cotton coats and a supply of flannel shirts are on hand to provide for comfort of men until woolen coats are received.
McArthur.....		5,500		This camp is being equipped with 2 suits per man for duty abroad.
Logan.....				No shortage reported.
Bowie.....		3,725	2,088	On Jan. 17, 1918, reported that shipments have been received to complete equipment; 1 overcoat, 1 coat, and 1 breeches, wool, per man.
Doniphan.....	2			On Jan. 20, 1918, reported 2,290 coats, wool, were required, but no breeches or overcoats: that with coats en route every man will be equipped with 1 suit and 1 overcoat. Sufficient cotton coats and a supply of flannel shirts are on hand to provide for comfort of men until woolen coats are received.
Shelby.....		5,100	1,900	On Jan. 17, 1918, reported a surplus of overcoats, coats, and breeches in hands of organizations, but made no mention of any shortage.
Beauregard....	10,863	3,094	1,042	On Jan. 18, 1918, reported that one complete uniform and overcoat for each man present except wool coats were on hand, but failed to give number or sizes required. New York reports shipment Jan. 8, 1918, 997 coats; Jan. 10, 1,340, with 470 yet to be shipped. On receipt of these coats a total of 29,808 coats will be on hand for 23,430 men. Sufficient cotton coats and a supply of flannel shirts are on hand to provide for comfort of men until woolen coats are received.
Cody.....		2,182	1,495	On Jan. 9, 1918, the depot quartermaster at El Paso wired that every man at this camp was equipped with 1 overcoat and 1 wool uniform.
Kearney.....		13,809	13,836	On Jan. 17, 1918, reported that upon receipt of coats expressed from Philadelphia depot on Jan. 2, 5, 9, 11, 12, and 16, 1918, he will have sufficient coats to equip command, and has sufficient breeches and overcoats. Sufficient cotton coats and a supply of flannel shirts are on hand to provide for comfort of men until woolen coats are received.

OFFICE QUARTERMASTER GENERAL,
December 29, 1917.

DEPOT QUARTERMASTER,
400 Brookline Street, Cambridge, Mass.:

Telegram sent you December 28, shortage cantonments and camps under your supervision. Take steps at once to purchase in your locality any uniform garment which is short on account of size or deficiency in order to give each man one woolen uniform complete in serviceable condition. In order to accomplish this you should make exchanges where necessary between camps and canton-

ments under your direction or have any garment in any cantonment or camp altered sufficient to fairly fit a man for which it is required. Report to this office daily the number of garments which you purchase and the number which you have altered. This condition at camps and cantonments under your supervision must be corrected within the coming week. If any garments uniform in quality or closely approximating for which a shortage exists of at least the full amount allowed in equipment C can be bought in your locality over and above what the men now require report by wire will be made to this office. You are not restricted to absolute uniform articles in purchasing the number required for the allowance authorized, but the articles purchased must be as closely approximating specifications as you would be willing to use in an organization commanded by yourself in the service. You are not limited to price except where the price is unreasonable, in which case you will take the article and report to this office for settlement of the question of price. The main thing now is to equip within the coming week the men in camps and cantonments intrusted to you with at least one fairly well-fitting uniform complete and a regular allowance of underclothing, socks, etc. The conservation officer at each cantonment and camp will be made use of to cooperate with you in making alterations with repair machinery at their disposal. In addition, you are authorized to employ garment makers to alter garments.

GOETHALS,
Per SMITH.

(To all depot and camp quartermasters.)

The CHAIRMAN. There is one other thing I would like to have explained. How long do you figure that a soldier's equipment will last him, ordinarily?

Maj. HARDEMAN. That varies with each different article. We figure that about 10 per cent of the breeches will have to be replaced each month and about 5 per cent of the coats. I can give you the number required for 100 men for each quarter. It takes one-fourth of 62½ pairs of breeches for every 100 men every three months; that is about 5 per cent of breeches per month. For the coats, you have one-half of that.

The CHAIRMAN. What about the shoes?

Maj. HARDEMAN. So far as the shoes are concerned, we figure that it takes 100 pairs of shoes for each quarter for each 100 men; that would be 33⅓ per cent.

The CHAIRMAN. Can you tell the committee in what length of time you have to completely furnish the soldier with a new outfit?

Maj. HARDEMAN. I have that table made out, showing the number required per month for each 100 men for each article of clothing required.

The CHAIRMAN. You can put that in the record.

(The matter referred to is as follows:)

Articles.	First year.		Subsequent years.	
	At home.	Abroad.	At home.	Abroad.
Blankets.....	4-5	9.4	1	4.4
Breeches.....	4.5	10.36	2.5	6.5
Coats.....	3.25	8.32	1.25	4.9
Drawers.....	12	19.29	9	12.6
Hats.....	2	4.29	1	2.5
Leggings.....	3.25	7.94	1.25	4.6
Shirts.....	4.5	8.28	2.5	5
Stockings.....	15	29.69	10	19.69
Shoes.....	6	12.4	4	8.2
Undershirts.....	9	18.23	6	12.23
Overcoats.....	2	4.2	1	2.2

The CHAIRMAN. What I am trying to arrive at is: It has already been testified that you were given enough money last year, with the deficiency you are going to ask for, to fully equip an army of 2,000,000 men when your contracts are all carried out, up to the close of this fiscal year. We are going to be called on to explain why we should increase that appropriation by \$800,000,000 to equip an army of 3,000,000 men.

Gen. SHARPE. That large increase is due to the fact that we have to meet very large calls which Gen. Pershing has made for the renewal of the supplies. I can give you a list of what Gen. Pershing has asked for, in regard to each article of clothing.

The CHAIRMAN. You can put that in the record.
(The matter referred to is as follows:)

Supplies to be shipped for troops overseas for each 25,000 men.

Articles.	Initial ship- ment.	Monthly there- after.	Articles.	Initial ship- ment.	Monthly there- after.
CLOTHING.			EQUIPAGE.		
Belts, waist.....	7,122	7,122	Axes and helvcs.....	15,000	3,000
Breeches, wool.....	45,000	14,918	Bags, water sterilizing, with extra cover.....	400	133
Blankets.....	50,000	10,000	Bags, surplus kit.....	3,320	150
Boots, rubber ¹	25,000	12,500	Batons.....	14	2
Caps, winter.....	25,000	² 5,000	Bedsacks.....	25,000	8,000
Chevrons, wool, pairs.....	10,000	10,017	Brassards, red.....	283	140
Coats, denim, for engineers.....	34,000	8,500	Brooms, corn.....	1,280	1,280
Coats, denim, except engineers..	25,000	1,250	Bugles, with slings.....	250	50
Coats, wool.....	35,000	11,193	Cords, hat.....	25,000	12,500
Drawers, wool.....	90,000	29,977	Desks, field, small.....	284	50
Gloves, yellow, horse hide, pairs.....	12,000	380	Desks, field, large.....	50	10
Gloves, riding, pairs.....	9,000	2,932	Flags, chaplains.....	14	2
Gloves, woolen, pairs.....	25,000	8,174	Instruments, band, sets.....	10	2
Gauntlets, winter, pairs.....	25,000	³ 5,000	Oil, neatsfoot, gallons.....	2,000	1,000
Hats, service.....	18,000	5,811	Pickaxes and helvcs.....	3,000	1,000
Jerkins.....	25,000	³ 1,250	Pickaxe helvcs, extra.....		800
Leggings, canvas, pairs.....	32,000	10,607	Hypochlorite of lime, tubes.....	300,000	100,000
Leggings, leather, pairs.....		633	Pfns, tent, shelter.....	130,000	10,000
Laces, shoe, field.....	56,000	18,616	Poles, tent shelter.....	25,000	8,334
Moccasins, pairs (see also cable 306, par. 2-A).....	⁴ 125,000	³ 31,250	Pouches, music.....	360	90
Overcoats.....	25,000	5,000	Shovels, short handle.....	1,650	200
Overshoes.....	⁵ 25,000	5,000	Slings, color.....	65	7
Slickers.....	25,000	5,000	Spades.....	2,000	667
Shirts, flannel.....	34,000	11,196	Stands, music.....	360	90
Shoes, field, pairs.....	56,000	18,590	Sticks, size, shoe.....	200	20
Stockings, wool, pairs ⁶	125,000	44,752	Stretchers, shoe.....	200	20
Toques.....	50,000		Tapes, foot-measuring.....	200	20
Tags, identification, with tape..	30,000	1,878	Tents, shelter halves.....	25,000	2,000
Trousers, denim, for engineers..	45,000	11,250	Tents, storage.....	500	100
Trousers, denim, exc., engineers.	25,000	1,250	Screens, canvas latrine.....	300	150
Undershirts, wool.....	75,000	27,796	Whistles and chains:		
			Acme.....	2,000	667
			Kinglet.....	700	234
			Siren.....	500	167

¹ Two-thirds hip, and one-third knee.
² For four months only.
³ For three months only.
⁴ Initial stock.
⁵ Tentative figures.
⁶ Heavy weight, October to April, inclusive; light weight, May to September, inclusive.

Mr. SHALLENBERGER. We make these appropriations for a year.
Gen. SHARPE. Yes.

Mr. SHALLENBERGER. We are given the number of shoes a man uses in each quarter, and he practically needs a new pair of shoes every three months. Could we not have the information as to how many shoes and how much clothing a man requires for the year, so that

when we appropriate for the year, we can have an accurate understanding of what the needs are?

Gen. SHARPE. I have given you a list of the calls which Gen. Pershing has made.

Mr. SHALLENBERGER. Can you not let us have that for the year?

Gen. SHARPE. They are very largely increased.

Mr. KAHN. How many yards of cloth have you contracted for for suits of clothes?

Col. HIRSCH. Of the 16-ounce cloth we have contracted for a little over 31,000,000 yards, the deliveries running to December, 1918.

Mr. KAHN. How many yards are required for a soldier's uniform?

Col. HIRSCH. You can figure on an average of about $3\frac{1}{4}$ yards, I should say.

Mr. KAHN. That would practically provide for nearly 10,000,000 uniforms.

Col. HIRSCH. That is correct; yes, sir.

Mr. KAHN. That is what you are figuring on. For how large an army would those uniforms provide?

Col. HIRSCH. When we first started out producing, we were told to buy enough of that cloth to provide uniforms for 500,000 men, and then on top of that came the estimate to purchase for another 500,000 men, and then came an order to estimate for replenishment for a million men for another 12 months. Then we got a call for another 500,000 men, with replenishment for 12 months, and on top of that another for about 456,000 men for replenishment for 12 months, so that we were practically told to place orders for 1,956,000 men, with replenishment for 12 months, and in some of the items of clothing and equipage we have already bought what was necessary for an initial equipment for 1,956,000 men, plus the replenishment as figured on by past experience for the same number of men.

But in making purchases for the 16-ounce and the 30-ounce goods for overcoatings and the flannel shirtings, and also the blankets, the Quartermaster General authorized the committee on supplies, where they had advantageous offers, to recommend purchases up to the end of December, 1918, and in some cases, particularly in 16-ounce goods, and in 30-ounce goods, and in blankets, and in shirting flannels, more purchases have been made than the allowances for 1,956,000 men, plus replenishment for 12 months would be required, simply because the Quartermaster General decided that where advantageous offers could be obtained for those, it would be to the advantage of the Government to place that many ahead.

Gen. SHARPE. The purpose being to keep the factories at work.

This matter came up in August or September last year, and they were about to enter into a large contract with the American Woolen Co., and I asked if after the mills were started in operation, instead of stopping on the 30th of June, 1918, they could not make a more favorable contract, as far as the Government was concerned, if they made a contract for additional mills, running the deliveries between June 30 and December 31, 1918. They said they could, and so I authorized them to go ahead under that proposition, and I had the matter approved by the Secretary of War, the purpose being to keep the factories in operation.

Mr. KAHN. What do you mean by more favorable contracts? Were you able to get the goods at a reduced price?

Gen. SHARPE. At a much reduced price.

Mr. KAHN. Now, of course, you have practically, as the Colonel said, one coat for every man in the Army, as I understand it.

Gen. SHARPE. One suit with the exception of the coats.

Mr. KAHN. I understood you to say you had one suit for every man in the Army.

Mr. GORDON. The witness just stated that they had contracted—

Mr. KAHN (interposing). I know they have contracts out, but they only have one suit for every man.

Mr. TILSON. Is the converse true, that every man in the Army has one suit?

Mr. KAHN. Yes; that is what the testimony is.

Mr. TILSON. I mean, has he the suit?

Mr. KAHN. That is what I was going to ask.

Gen. SHARPE. With the exception of the coat.

Mr. KAHN. Do you think that one suit is sufficient?

Gen. SHARPE. The allowance is two suits.

Mr. KAHN. That is, you are one suit short for every man in the Army to-day.

Capt. DALY. No, sir; not for the men abroad.

Gen. SHARPE. All the men who go abroad, before they get aboard the transports must have two suits with them.

Mr. KAHN. That is about 200,000?

Capt. DALY. And in addition, they must have six months' reserve.

Mr. KAHN. They are fully equipped, but there are still over a million men in this country who have only one suit; is not that right?

Col. HIRSCH. I do not believe that statement is exactly correct. When we first started out to equip the Army the initial equipment was one coat and two pairs of breeches for every man, and the orders were placed on that basis. If it had not been for the fact that when the troops went abroad they immediately gave two coats and two pairs of breeches to every one of those men, and in addition to that sent a six months' reserve to France, which took away the stuff available for that number of men, in all probability we would have had one coat and two pairs of breeches for all the men, which is what we figured on in the beginning.

After the troops began to go abroad they decided they wanted to figure on giving them two coats and two pairs of breeches, but we had always figured on two pairs of breeches, and at the present time a great many of the men have two breeches, and the stuff now coming in will very shortly give every man two pairs of breeches.

Mr. KAHN. I am not complaining of the Quartermaster General's Department. There has been a great deal of criticism throughout the country that the men have not been properly supplied, and what we want to get at is the reason for that, so that when these questions are asked us on the floor of the House we will have information to furnish to Members of the House.

How long do you think it will take before you can furnish every soldier who is now in the camps in the United States with a full uniform equipment; that is, two coats and two pairs of breeches?

Gen. SHARPE. Col. Hirsch has the data in regard to that.

Mr. KAHN. Can you put that in the hearings? Can you tell me when we can expect that?

Gen. SHARPE. You must remember, Mr. Kahn, in giving that statement we have got to consider this: That the suit which the man now has may have to be replaced by another, so that even if you gave him one suit he would not then have the two suits in addition. You have got to take that into account. We are taking all of this clothing and putting it through the renovation plants and restoring it as soon as possible.

Mr. KAHN. In that connection, what kind of clothing has the soldier now?

Gen. SHARPE. Woolen, sir.

Mr. KAHN. All over the country, in all of the camps?

Col. HIRSCH. With the exception of those—there is a shortage of the coats, which has been noted by Maj. Hardeman, but the soldiers have woolen clothing everywhere. Those men who have not woolen coats have the cotton coats.

Mr. KAHN. But in this kind of weather the cotton coat does not keep him very warm, does it?

Gen. SHARPE. There was one camp down South which had the O. D. cotton, and the other day when they were asked how much surplus woolen they had on hand we found that the reports indicated that there was a considerable surplus down there of woolen clothing.

Mr. KAHN. Why was that?

Gen. SHARPE. They were called upon for an explanation, and it seemed that until they were ordered to go into wool they had been wearing the cotton by preference.

Mr. KAHN. What camp was that?

Maj. HARDEMAN. That was Camp Travis at San Antonio. The question came up as to how many woolen coats and breeches they would have that were not of the proper sizes, and they did not know, because they had not issued any, and were wearing cotton, and they could not give us the answer until they had issued all that they had.

Mr. KAHN. Would it not have been possible to transfer the woolen coats to some northern camp, where the weather was very cold, and where the woolen coats were needed.

Maj. HARDEMAN. We did not know how many they had. They were not using the coats until we asked them how many they had of the improper sizes.

Mr. KAHN. I understand that the men in some of the camps are still wearing overalls for drill purposes.

Gen. SHARPE. They were given the men to protect their clothing. That was the purpose of doing that, to conserve their clothing.

Mr. KAHN. It was not due to the fact that they had no military uniforms?

Gen. SHARPE. No, sir; they were given to the men to conserve the one suit of clothing they had.

Mr. HARRISON. I have here a letter along this same line that I have just received. It is dated January 8, and I received it on January 10. It purports to be from the father of one of the men, who has visited his son at Camp McClellan.

Mr. ANTHONY. Where is Camp McClellan?

Gen. SHARPE. At Anniston, Ala.

Mr. HARRISON. I know this gentleman is a responsible man so far as he is personally concerned. It may have been an accidental circum-

stance that he found conditions which he describes, but it is along the line Mr. Kahn was asking you about.

Mr. KAHN. What is the date of the letter?

Mr. HARRISON. It is dated January 8. It says:

I have just returned from a visit to Camp McClellan, Ala., to see my son, whom I found quarantined in a detention camp, improperly clothed (in fact, with no pants), having two pairs of old summer pants, and both of them exposing his drawers; asked him why he did not have better, and was told by him that he had an order for clothes, but they issued him some he could not wear, so small could not get in them, and I found many others with summer apparel. Those that we would come in contact with would say that better had sometimes been issued them, too small, and when they would say they would not fit them (too small), would be told, "Damn you, take them; all you get"; my son, who had comfortable quarters in the barracks, when one of his company happened to have a case of mumps, he with some others were taken to a detention camp, and there quarantined upon the frozen ground, and the day I was there no fire. He said they had no wood; was told some had to carry wood 2 miles. I saw many carrying wood. In that detention camp men were there quarantined all together, who had come in contact with mumps, measles, meningitis, scarlet fever—whatever happened to be in camp. No separation. No farmer would keep his stock in such condition and expect them to thrive.

I found that the volunteer man was in much worse condition than the drafted man. Conditions seemed to operate in many ways to crush out all his patriotism. I talked with Col. ———, whom I was sorry to know had been removed from the command of his regiment; that he had not been able to get supplies for his men.

I ask you as a favor to use your influence to see if the conditions can not be remedied to some extent, that the men can get proper clothing, and one class of men in contact with mumps or measles or other diseases may be separated, and comfortable quarters while exposed to such things. My boy said he was well when I saw him; did not know how long he could stand it. He was put there for 21 days, and was serving his twentieth day when I saw him, but said he would be liable to be there 21 days more. Many told me there was some that had been in quarantine since September.

Hoping you will let me hear from you, and that through the department you may be able to get conditions bettered and men made comfortable, I remain,

Yours, truly,

That is a camp of the National Guard, not of the drafted men.

Mr. KAHN. Of course, Gen. Sharpe would not be able to tell us anything about the medical conditions.

Mr. HARRISON. He has not got the pants, according to this man, and the coats are short.

Maj. HARDEMAN. On December 26 the commanding general at Camp McClellan reported that he had overcoats for every man in the camp, and the report goes on to say:

1. Sufficient overcoats, woolen underwear, stockings, and blankets to equip this command now in hands of men. Enough woolen coats and breeches in quantity on hand to equip command with one suit each, but approximately 1,200 men can not be equipped on account of proper sizes not being available.

MORTON.

Mr. KAHN. That letter was written three days after that telegraphic report was made. Do you think it would take three days to issue the clothes to the men?

Maj. HARDEMAN. I can not say. This report comes from the commanding general of the camp.

Mr. FIELDS. Do you know about the conditions at Camp Zachary Taylor?

Maj. HARDEMAN. Camp Taylor was reported to be 111 overcoats, 1,118 woolen coats, 1,086 breeches, and 300 suits of woolen underwear.

Mr. FIELDS. On what date was that?

Maj. HARDEMAN. On December 26. The quartermaster who is charged with supplying them was directed to make up his deficiencies, and this is his report:

1. Telegram of December 28, Goethals per Hardeman, regarding which you called me on the phone Saturday, was apparently based on a general misunderstanding, for after conversations with all the camps, it appears that practically every man in camp is now equipped with overcoats, coats, woolen breeches, and woolen underwear and wool stockings, and I will endeavor to get a statement from the commanding general of each camp to that effect.

2. Camp Funston's report on shortage was based on the anticipated arrival of 14,000 or more men during the coming month. Camp Taylor also anticipated the arrival of additional men. Camp Pike likewise. * * *

W. F. CLARKE,

Colonel, Quartermaster Corps, United States Army.

Mr. FIELDS. I saw a soldier from Camp Zachary Taylor in my town on Monday following Christmas with a cotton suit on, and the temperature had been 24° below zero at Louisville, and he told me many soldiers were in cotton suits. I know he was in a cotton suit, because I saw him in his office.

Mr. KAHN. You found that during the border trouble you had a good deal of difficulty in fitting the troops from the various States. For instance, some of the boys from Georgia, I understand, have long bodies and short legs, and the men from different parts of the country seemed to have developed a physical condition somewhere so that they had short bodies and long legs. Were you able to take care of the present conditions by reason of the experience that you gained in the Mexican trouble? Was that a guide to you for sending certain classes of clothes to certain camps where you knew that there were men who were built along certain lines?

Gen. SHARPE. The men called into the draft have been very much larger in some places in the country than we have ever had in the case of any men coming into the Army. For instance, in Michigan and other places in the West they are very much larger.

Mr. KAHN. The men from the lumber camps, I presume, are much larger.

Gen. SHARPE. Yes, sir. There was an officer in the office this morning from one of the camps who had two divisions to supply, and he said that our tariff of sizes enabled him very well to equip the men in those divisions which he had coming in. The men who had come from the West were very large, and he had to have extreme sizes for some of them. There was one man for whom he had to order shoes of size 15½. Of course, no tariff can be based on such a thing as that.

Mr. KAHN. I was down at several of the camps on the Mexican border, and I found there that the men had difficulty in getting the proper sizes.

Gen. SHARPE. They did, sir. We had men from some of the States who were tall men and rather thin. Our large sizes are contemplated to provide for rather strong men. We had not gone into that matter in the sizes.

Mr. KAHN. Do you not think you ought to take advantage of those experiences you have had?

Gen. SHARPE. We have in the past, but it is a very serious thing to change these tariffs of sizes because a few instances indicate that they do not fit.

Mr. KAHN. There were not a few instances on the Mexican border, but instances of whole companies.

Gen. SHARPE. That may be, but at the same time we have tried to modify that in order to get the proper sizes, and we have asked the various divisions to report from time to time whether there is any indication that there is a modification desired in the tariff of sizes. They have to make requisitions for the sizes they call for and that must be the criterion we have.

The CHAIRMAN. General, is the statement in newspapers, purporting to come from you, that the size of the foot of the drafted man is larger than that of the man in the Regular Army, true?

Gen. SHARPE. In some parts.

The CHAIRMAN. The statement was that it applied generally throughout the country.

Gen. SHARPE. That is a mistake. Take it, for instance, in Camp Custer. The men there were very large and had to have very large sizes of shoes.

We have made mistakes, and I am not ashamed to admit them, either.

But when the officer at the depot in Chicago was informed that at Camp Custer they had a certain number of small-sized shoes on hand, and they wanted the larger sizes substituted, unfortunately they repeated the same-sized shoes, and that made an excess of that size of shoes. Instead of having a thousand of the small-sized shoes on hand, they were sent right back there, and the order was duplicated, and they got a thousand of that same size, and nobody was benefited by it. He is shipping out hundreds and hundreds of invoices a day. There is no excuse for it at all.

Mr. KAHN. Mistakes will happen; we recognize that fact, of course.

Gen. SHARPE. Maj. Hardemann tells me that the packer in the depot who substituted these sizes without authority has been dismissed. The thing had to be traced back after the shipment was made.

Mr. KAHN. Then you have done the best you could to punish the man who was guilty of that offense?

Gen. SHARPE. Yes, sir. My only regret is that it ever occurred.

Mr. KAHN. How many suits of woolen underclothing or winter underclothing are you still short?

Gen. SHARPE. None at all.

Mr. KAHN. None at all?

Gen. SHARPE. No, sir.

Mr. KAHN. That is well taken care of?

Gen. SHARPE. Yes, sir.

Mr. KAHN. How recently has that been taken care of?

Maj. HARDEMAN. During the month of December.

Mr. KAHN. During the last month?

Gen. SHARPE. They had two suits up to that time. We started shipping them in October, but because of the congestion the shipments were very much delayed; but we started shipping two suits for every man. That was probably in the latter part of November that they got the two suits.

Mr. KAHN. How about the heavy overcoats? Are the men all supplied with them now?

Maj. HARDEMAN. Yes, sir. There is this report of December 26 that says that certain men in some of the camps could not be fitted with the overcoats that were on hand. That has been remedied by sending proper sized coats. From the reports received to date they are there and being issued.

Mr. KAHN. How long is an overcoat supposed to last?

Maj. HARDEMAN. Two overcoats a year in this country.

Mr. KAHN. Have you enough reserve overcoats, or will you have enough reserve overcoats, to give every man an additional overcoat for this year's supply?

Maj. HARDEMAN. Not yet.

Mr. KAHN. Will you have?

Maj. HARDEMAN. They are coming in very rapidly.

Mr. KAHN. Will you have enough?

Col. HIRSCH. According to the records of what has already been contracted for, we will have, up to June, 1918, 5,417,000 overcoats.

Mr. KAHN. That would give two overcoats for each of 2,500,000 men.

Col. HIRSCH. In addition to that, we have material coming in the spring of this year that will make considerably more. We were directed to make that up into overcoats, and it has been practically all contracted for at the present date.

Mr. KAHN. You are not going to have any further trouble on the question of winter overcoats?

Col. HIRSCH. No, sir.

Gen. SHARPE. Gen. Pershing's initial request was for overcoats for 25,000 men and upkeep for 5,000 men each month, making 55,000 for 11 months. In other words, if 25,000 men are shipped over to-day, in a year's time they have 80,000 overcoats. That is over three overcoats they have over there in a year.

Mr. KAHN. Do you assume that that proportion will continue during the war for all of the troops that go abroad?

Gen. SHARPE. Yes, sir. In reference to that matter, we have consulted with the French and English officers in our office, and they say that just about corresponds with their upkeep during the past two and a half years over there.

Mr. KAHN. Have you organized repair companies?

Gen. SHARPE. Yes, sir. We have a repair organization in every one of the cantonments, and in addition to that, we have arrangements made in the cities, and we are sending abroad to France a very large repair organization. That includes everything. That is in connection with the mechanical repair shops going abroad.

Mr. KAHN. Do they clean these overcoats?

Gen. SHARPE. They renovate them—entirely repair them.

Mr. KAHN. Is there any cost to the soldier for that?

Gen. SHARPE. No, sir; none at all. The uniform is issued to the man gratis.

Mr. KAHN. And the repairs are made without cost to him?

Gen. SHARPE. Absolutely. That is, all Government property.

Mr. KAHN. In reference to the shoes, what is the cost of a pair of Army shoes at the present time?

Gen. SHARPE. I think it is about \$4.65. That is the field shoe. That is the only kind we are shipping abroad.

Mr. KAHN. What other kind of shoes do you have?

Gen. SHARPE. We used to have a marching garrison shoe, made of calfskin, but we have discontinued the issuing of that type.

Mr. KAHN. Is that shoe you are issuing the tan shoe we see on the soldiers' feet here?

Gen. SHARPE. That is the one we are issuing here, but abroad we issue the field shoe, with the hobnails.

Mr. KAHN. You do not issue those shoes until they get on the transports to go abroad?

Gen. SHARPE. There were some of them issued, but Gen. Pershing called for nothing but the field shoes abroad. He does not want any of the marching shoes sent abroad.

Mr. KAHN. Have you organized any shoe-repair companies?

Gen. SHARPE. Yes, sir; for shoes and everything.

Mr. KAHN. You have cobbler units?

Gen. SHARPE. We have a regular organization provided, with all the necessary machinery and everything installed at every one of the cantonments, and also sent abroad. It is a very large and comprehensive repair shop. The English officers who were over here with their commission spoke of the salvage which came from the battle fields.

Mr. KAHN. I saw some pictures in one of the papers yesterday of the great volume of shoes that were turned in to be repaired.

Gen. SHARPE. In the English Army they prefer the repaired shoes to the new ones. Those shoes have been broken in to use, and they are softer to wear.

Mr. McKENZIE. You have to uniform the shoe repairers just the same as the soldiers, and you furnish that equipment for them?

Gen. SHARPE. Yes, sir.

Mr. KAHN. They are enlisted men?

Gen. SHARPE. They are enlisted men who go abroad.

Mr. KAHN. Do you have any trouble with them because of their being paid only the salary of the enlisted man?

Gen. SHARPE. No, sir.

Mr. KAHN. You have no trouble getting men for those units?

Gen. SHARPE. No, sir.

Mr. KAHN. In reference to the hat cord which shos the branch of the service the man belongs to, how many milions of those have you?

Gen. SHARPE. Those cords are lost very frequently, and they have to renew them.

Mr. KAHN. Do they have to renew them?

Gen. SHARPE. As far as the hat is concerned, Gen. Pershing has indicated that he does not care for the hat, and wants some change made to a cap, and wants to discontinue the use of our campaign hat, but we can not do that because it is the only hat we have, and it is the only hat that will do, or something like that, to go into the tropics, or places where it frequently rains. You must have the protection that those hats give. You must have better protection than a cap gives.

Mr. KAHN. I understand that you get the helmet over there.

Gen. SHARPE. That is in the trenches. In their billets, or cantonments, they have been wearing the hat, but Gen. Pershing does not wish any more of those hats sent. He wants to substitute a cap in place of the hat, and there is a modification of our present cap which has been proposed.

Col. HIRSCH. They spoke of some such hat as the French are wearing. That is the kind he spoke of.

Gen. SHARPE. He wants that for the man to carry around and put on their heads, and then put his helmet over it, and then he wants a modification of our present cap for a man to wear when he is off duty. He has indicated that he does not want the hat.

Mr. KAHN. Does he give any special reason why he wants that modification.

Gen. SHARPE. Some of the officers coming back from over there whom we have questioned about the matter have been rather surprised at the recommendation.

Col. HIRSCH. I think he wants the cap for the men to use when they go to the trenches. When they get in the trenches they put on the steel helmet, and they can put the cap in their pockets, whereas the campaign hat is in the way, and a man has no further use for it.

Mr. KAHN. The campaign hat would presumably be ruined in the trenches.

Gen. SHARPE. They do not take the hat to the trenches. The hats are left back in their billets or cantonments.

Mr. KAHN. They put on the helmets when they go into the trenches?

Gen. SHARPE. When they are ordered into the trenches. What Gen. Pershing wants is something for them to wear after they come back—when they are resting—before they go into the trenches again. He does not want the hat; he wants a modification of our cap.

Mr. KAHN. Have you taken any steps to supply him with what he wants?

Gen. SHARPE. They are making different designs.

Maj. HARDEMAN. We asked him in a cablegram to describe what he desired.

Mr. ANTHONY. What would it be like—the hat which the English wear?

Gen. SHARPE. It is much like the hat we have—like the cap.

Mr. ANTHONY. Would it have a vizer?

Gen. SHARPE. Yes, sir; like the officers' caps.

Maj. HARDEMAN. The present one he says is too stiff and heavy, and he wants a lighter cap than that.

Gen. SHARPE. We tried to make it out of cane—putting that around the brim to make it lighter.

Mr. GREENE. Has that cap anything to commend it except the regulations that direct it to be worn?

Mr. KAHN. They had about three or four changes in caps for three or four months.

Gen. SHARPE. I should hate to see a change in the design of the cap made, because it would cost an enormous amount of money which would be locked up in a garment which is not further to be used.

Mr. GREENE. I was thinking of the original æsthetic revelation of the design of the thing. I think your point is well taken.

Mr. KAHN. What have you done toward procuring the cotton cloth for the uniforms to be made in anticipation of warmer weather?

Gen. SHARPE. Contracts have been made for great quantities of that, and a great many of the garments have been made and put in storehouses.

Mr. KAHN. Will you be able to issue them promptly upon the coming of milder weather?

Gen. SHARPE. I think we have already sent them out to some of the cantonments.

Mr. KAHN. We hope we will not have complaints coming in that the men are wearing winter uniforms with the thermometer at 95 degrees.

Gen. SHARPE. I do not think that will be possible. We have ample quantities of that, and are distributing it now, commencing in the South.

You asked for the number of hat cords, the number contracted for. That is 6,510,341, and that would be about three for each man.

Mr. KAHN. You consider that they lose those cords so rapidly that they will require that many?

Gen. SHARPE. Yes, sir.

(Thereupon the committee adjourned to meet to-morrow, Tuesday, January 15, 1918, at 10.30 a. m.)

COMMITTEE ON MILITARY AFFAIRS,
HOUSE OF REPRESENTATIVES,
Tuesday, January 15, 1917.

The committee met at 10.30 o'clock, a. m., Hon. S. Hubert Dent (chairman) presiding.

STATEMENT OF MAJ. GEN. HENRY G. SHARPE, QUARTERMASTER GENERAL, ACCOMPANIED BY COL. H. J. HIRSCH, COL. J. P. WOOD, MAJ. L. HARDEMAN, MAJ. WONSON, AND CAPT. C. P. DALY, QUARTERMASTER CORPS—Resumed.

Mr. KAHN. Yesterday, Col. Hirsch, and I think Gen. Sharpe also, stated that the recurring demands from Gen. Pershing for additional supplies somewhat hampered the work of the department. Could you give a list of the additional supplies that Gen. Pershing has been asking for?

Gen. SHARPE. I have some of the things. He is asking for jerkins, which are made of lighter stock, woolen clothing, mocassins, toques, large quantities of rubber boots, and then he also asked for winter caps, arctic overshoes, winter gauntlets, and spiral puttees for use in the trenches.

Mr. KAHN. Have you any of those articles that he calls for except the spiral puttees?

Gen. SHARPE. We are having them all manufactured and sent over to him. They were new articles entirely.

Mr. KAHN. Are any of the soldiers on this side supplied with anything like that?

Gen. SHARPE. With rubber boots. We do occasionally supply them with rubber boots, but we do not issue them as generally as he does over there. They use them in the trenches over there.

Mr. KAHN. Do you know whether the English and the French use these same materials?

Gen. SHARPE. Yes, sir.

Mr. KAHN. So that Gen. Pershing is simply duplicating the things that the other armies use in the trenches.

Gen. SHARPE. Yes, sir; he found that necessary.

Mr. KAHN. Will the necessity for acquiring these things materially interfere with you in the furnishing of those things which the soldiers in this country actually need at this time?

Gen. SHARPE. I do not think they will interfere.

Col. HIRSCH. I have here a list showing everything issued to the men in this country, and everything issued to the men on the other side, and I think that will answer what you are asking about, in reference to the things that the men abroad get, that the men in this country do not get.

Mr. KAHN. Will you kindly tell us what the difference is in the equipment of the soldier in this country and the soldier abroad?

Articles of clothing and equipage issued per man.

Articles.	For service abroad.	For service at home.
Belts, waist.....	1	1
Boots, rubber, pairs.....	1	¹ 1
Breeches, wool.....	2	2
Caps:		
Service.....	1	.....
Winter.....	1	¹ 1
Coats:		
Denim.....	1	1
Wool.....	2	2
Cords, hat.....	1	1
Drawers, pairs.....	3	3
Gauntlets, winter, pairs.....	1	¹ 1
Gloves:		
Horsehide (aero squadrons and machine gun companies only).....	1	1
Riding (each mounted man).....	1	1
Wool.....	1	1
Hat, with tying cord.....	1	1
Jerkins.....	1	.....
Laces:		
Leggin, pairs (extra).....	2	2
Shoe.....	2	2
Leggins, pairs.....	2	2
Moccasins.....	1	.....
Ornaments, set.....	1	1
Overshoes, pair.....	1	1
Overcoats.....	1	¹ 1
Shirts, flannel.....	2	2
Shoes, pairs.....	2	2
Slickers.....	1	1
Stockings, wool, pairs.....	5	5
Tags, identification, with tape.....	2	2
Toques.....	1	.....
Trousers, denim.....	1	1
Bags, barrack.....	1	.....
Blankets.....	3	3
Pins, shelter tent.....	5	5
Pole, shelter tent.....	1	1
Tent, shelter half.....	1	1
Hats, denim.....	1	¹ 1
Undershirts.....	3	3

¹ Where authorized.

Col. HIRSCH. Each man here and each man abroad has the rubber boots, but in this country they only get them when specially authorized. Both here and abroad each man has to begin with two coats and two pairs of woolen breeches. Abroad he has one leather jerkin, and that has recently been adopted. Both here and abroad they have one coat denim; that is intended for working purposes. Both here and abroad they are supposed to have two coats—wool. As a

matter of fact, every man who has gone abroad has had issued to him two coats, but in this country so far we have only been able to issue them one coat, wool, and it is supposed that at this stage a few men are still without the one coat, wool.

Mr. KAHN. How soon will you be able to furnish that?

Col. HIRSCH. My idea is that there are enough available to-day; that if they are distributed there will be enough to give each man one coat, wool. There are quite a number reported that are of small sizes, that apparently can not be utilized at this time, but at the same time, even taking into consideration these small-sized coats, if they were all drawn in and redistributed, the possibilities are that some of them might be utilized in certain sections of the country.

There were 89,600 coats, wool, that have been prepared for shipment abroad, but that have not been shipped yet. Yesterday Gen. Goethals gave instructions to pull back 75,000 of them and issue them to the camps of this country, and my own opinion is that with those coats plus what are coming in now every day there ought to be more than sufficient to give every man in this country one coat, wool.

I do know, as a matter of fact, that some of the men have already two coats, wool. That is an unfortunate matter in connection with the distribution in some of the camps. It is a matter which is very hard to control. Some people will hog it a little bit and get two, whereas some others do not get any.

Mr. KAHN. Who is responsible for that?

Col. HIRSCH. That is partly explained in this way, that they say it is a local condition. I think that you can get a better explanation than that when you get Col. Wood on the stand.

The men both here and abroad get one hat cord apiece. They get three pairs of winter drawers apiece; they get one pair of winter gauntlets abroad, and here only when specially authorized. Each mounted man gets a pair of riding gloves, both here and abroad, and one pair of woolen gloves. Each man, both here and abroad, gets one campaign hat, and there is one jerkin to each man abroad. That is a leather jerkin, lined with woolen material, that is worn over the coat and under the overcoat.

Each man gets two extra pairs of legging laces, both here and abroad, and two pairs of shoe laces; two pairs of leggings; that is, either one or the other; either the woolen spiral legging or the canvas legging.

The orders at the present time are that in this country only canvas leggings will be issued and used. We find, however, that we can get the spiral legging easier than the canvas legging, because of the difficulty of getting the canvas duck.

Abroad each man gets one pair of moccasins; he gets one set of ornaments, both here and abroad. Those are the collar ornaments.

Mr. KAHN. What is the character of the moccasins that they get?

Col. HIRSCH. The moccasin has been made of shillings—that is, the skin taken off of the back of the sheep and short ends of wool—and that is made of wool on the inside. That he wears inside of his rubber boots. It is very warm, and the only difficulty is that when worn abroad they will probably be full of lice. They say that the shilling attracts the lice, for some particular reason.

Mr. KAHN. Those are what are called cooties?

Col. HIRSCH. Yes, sir. Abroad each man gets a pair of overshoes, and in this country gets them when authorized. Each man gets one overcoat, both here and abroad, and two flannel shirts; each man gets two pairs of shoes and one slicker.

Mr. KAHN. What is that?

Col. HIRSCH. That is a rubber slicker, to wear when it rains.

Mr. TILSON. That is the same as the Cavalry type?

Col. HIRSCH. We have only one type.

Gen. SHARPE. They have eliminated the poncho.

Col. HIRSCH. Each man gets five pairs of woolen stockings, and each man gets two identification tags.

Abroad each man gets a toque, which is a woolen scarf, that he wears under the steel helmet, and he can use it as a scarf when he goes off duty.

Each man gets one pair of denim working trousers, both here and abroad; one barrack bag; three blankets apiece, both here and abroad; five pins for the tents, and one pole.

Mr. TILSON. Are you using wood or aluminum?

Col. HIRSCH. We are using wood entirely.

Mr. TILSON. The aluminum pins did not prove satisfactory?

Col. HIRSCH. No, sir.

Mr. KAHN. Will the manufacture of the jerkin which you have described interfere with the manufacture of other clothing?

Col. HIRSCH. No, sir.

Mr. KAHN. Of course, if the entire Army goes abroad, you will have to have many millions of those jerkins.

Col. HIRSCH. We have ordered quite a number to date, and most of them have been delivered. It is a fact, however, that they have only figured on the number of men who are actually abroad.

Mr. GORDON. What is a jerkin?

Gen. SHARPE. It is a sleeveless leather jacket, lined with very thick wool.

Mr. KAHN. It is a garment which Gen. Pershing has requested for the use of the men in France and in Belgium. Col. Hirsch explained that it is made of the skin of the sheep, with the wool inside.

Gen. SHARPE. It is practically a woolen garment.

Col. HIRSCH. The jerkin is made of leather, and it is somewhat similar to what you very often see automobilists or aeroplane people wearing. The idea is to keep out the cold air, the leather being impervious, and it is lined on the inside with about 25 or 30 ounce material, and it is wanted to keep the men warm, and it will keep a man warm. We have purchased, up to date, 510,400, most of which have been delivered.

Mr. KAHN. Have you contracts for more than that number outstanding?

Col. HIRSCH. No, sir; that was the limit of what we were authorized to contract for, and what we have contracted for and purchased to date.

Mr. KAHN. Assuming that in this year we will be getting a good many more men over to France, are you going to have a shortage of jerkins over there?

Col. HIRSCH. There is no doubt but that we may expect further needs this year, and they are going to be anticipated.

Mr. KAHN. Have you commandeered any clothing at any of the retail stores here in the city?

Col. HIRSCH. About three weeks ago when the Senate passed a resolution directed to the Secretary of War, that he make an effort to get such uniforms as were in the hands of the retailers—we did that before that time. A short time ago instructions were given to purchase such uniforms as could be found in the hands of retailers throughout the country, and those instructions were sent to every depot quartermaster and every camp quartermaster.

The CHAIRMAN. Can you not tell us definitely when that was done?

Col. HIRSCH. My impression is that it was some time in the latter part of December, although I am not quite so positive about that. My assistant tells me it was December 29.

NOTE: The correct date is December 19.

Mr. KAHN. As a matter of fact, you went into the retail stores and took such clothing as they had, for the use of our soldiers?

Col. HIRSCH. That is the idea; whether we commandeered that clothing or not, I do not know. The attitude of the retail merchants seemed to be that they were only too willing to sell that clothing. But the country has been pretty well combed by the people who have purchased the goods—pretty well combed of the goods that can be utilized by the enlisted men.

Mr. KAHN. Has that commandeering resulted in any increased cost of clothing to officers? Have the stores that sold you their stock raised their prices and claimed that because of the fact that the Quartermaster's Department took away the clothing, they had to charge more?

Col. HIRSCH. I never heard that statement made.

Mr. KAHN. You do not know anything about that?

Col. HIRSCH. No, sir.

Mr. SHALLENBERGER. Did you take officers' clothing, or enlisted men's clothing?

Col. HIRSCH. We took everything, up to within a certain price, that could be utilized.

Mr. TILSON. Gen. Sharpe, what is the plan that you use in assigning clothing to the individual man? Do you use the clothing allowance that you have been using for a number of years in the Regular service, and, if not, what modification of that plan have you made?

Gen. SHARPE. In July the clothing allowance was discontinued and the issue of a certain definite quantity of clothing, known as first equipment C, was provided, to be issued directly by the Government.

Mr. TILSON. So that now you issue the same amount to each man, regardless of whether he is hard on his clothing or not. He can not, by being careful with his clothing, save a good part of it and get it in money at the end of six months, as he formerly did?

Gen. SHARPE. That is true. He is issued clothing, the purpose being for the Government to repair it, and reissue it to him after it has been repaired.

Mr. TILSON. Formerly you had some difficulty in getting some of the men to order the amount of clothing they ought to have, because by not ordering it they could get the price of it in cash at the end of six months?

Gen. SHARPE. That is true. At the Washington Barracks there is a contingent there which frequently has duty, or is frequently detailed from Washington Barracks for funerals and things of that kind, in the performance of which duty the men are brought into notice, and it became necessary for the commanding officer to require that the different detachments be brought to him for inspection before they went out, and he would return the men who were not properly dressed, and ask the company commander or the troop commander why he permitted men to turn out in such a manner, and the invariable reply was that the man was going to be discharged and the officer did not care to force the man to go to the expense of buying additional clothing. With this method there is no doubt but that it is going to make the general average of the presentation of the men better than it was before.

Mr. TILSON. Probably in the end it will, because as it is now there will be a tendency on the part of every man to get as much clothing as he can, as it does not come out of his clothing allowance at the end of the year, whereas before a man held back as much as he could, because he would get that amount in cash at the end of a certain period.

Gen. SHARPE. That is true; but the officers have discussed the matter a great deal, and it seems to be the opinion now that when our repair shops are all in thorough operation it may be possible that there will not be an increase in the actual cost over what the allowance heretofore has been. With the operation of the repair shops, any garment which is serviceable or any pair of shoes will be issued to the men.

Mr. TILSON. Do you go any further with the principle that the clothing belongs to the Government than you formerly did?

Gen. SHARPE. Yes, sir; it belongs absolutely to the Government now. There was a question of some title in it, in view of the fact that it was given to him, but the law never allowed him to wear it after he got out of the service, and he could not sell it.

Mr. TILSON. He usually sold it to some man in the service when he went out of the service?

Gen. SHARPE. Yes, sir.

Mr. TILSON. You can not carry that principle down to his underclothes and shoes?

Gen. SHARPE. With the shoes we do, and the hats, too. The great proportion of the hats used in the training camp at the Washington Barracks we thought were all going to be lost, but we had them all renovated, and they were reissued in very good condition.

Mr. GREENE. Along the line of what you have just explained to Mr. Tilson, the effect is that each soldier, regardless of any former arrangements by regulations, is now made an allowance in sufficient clothing, at the expense of the Government, without regard to any specified limitations of allowance? That is to say, if he is short of something on some occasion there is an issue made to him of that particular thing because he needs it.

Gen. SHARPE. That is true; but, at the same time, they are limited to the number provided in equipment C, and then an officer is always responsible for those things. The company officer is responsible, and if it is found that there is an undue expenditure the matter will be looked into.

Mr. GREENE. Of course, that is on the disciplinary side, but I am speaking more particularly of the economic policy. If, for any legitimate reason the soldier has lost, or has suffered loss by accident, or by wear and tear, of an item which formerly would have been charged against his clothing allowance, and which he might have been likely to husband with some particular care, and all that has been charged against his pay account for reissue, he now gets that reissue, as a matter of course?

Gen. SHARPE. He gets a reissue, and he is responsible for the damage done to it, and the charge is made against him. We frequently used to get shoes returned to us. They might have been burned on the soles, when on investigation it was definitely decided that the man had put his shoes against a stove in order to dry them and had burned them, and had then claimed that they were damaged. They were damaged, but in that case we would not make a reissue. The man would have to buy the shoes himself. Now, however, if he does that, he is charged with the value of the shoes.

Mr. GREENE. That is proper enough, but it comes down to the fact that the man is not only required to maintain his clothing allowance as he used to be and it was charged against him on his pay account, but the Government will maintain it regardless of the cause of the loss, or the shortage, or the wear and tear.

Gen. SHARPE. They have to.

Mr. GREENE. If, as you say, it is directly chargeable to the soldier's own carelessness it will be set off against his pay account.

Gen. SHARPE. Yes, sir.

Mr. GREENE. All of which comes to him any way, no matter what the cost of that is, and the necessity for reissue.

Gen. SHARPE. Yes, sir.

Mr. GREENE. The idea that he is limited in any sense by a certain standard of issue does not affect the reissue if he is below that standard?

Gen. SHARPE. No, sir.

Mr. GREENE. Now, I would like to ask you a question or two in regard to the matter of sizes. As I understand it, under normal conditions of garrison routine the quartermaster will have what experience shows is a reasonable allowance of a variety of sizes, so that with the help of the post tailor he can adjust the clothing to fit the average recruitment at that post, and it is not a matter of any great concern or importance, because each man can finally get fitted out without much trouble.

Has the experience of the service led to any general policy with regard to the distribution of these standard sizes in great numbers when you have such mobilizations as we had on the Mexican border or the present enormous reinforcement of the Army?

Gen. SHARPE. There is a tariff of sizes for each one of the articles of clothing, and they call for so many thousand of the different articles, which will be shipped to them in accordance with the tariff of sizes.

Mr. GREENE. But that is more or less based upon the normal conditions of peace routine, is it not?

Gen. SHARPE. Yes, sir.

Mr. GREENE. Has your experience thus far in the assembly of all kinds of men, who might not otherwise have been voluntarily in

the military service, but who represent peculiar differences in physical structure that the climate of the United States develops—has that led you to any rearrangement of policy in reference to the distribution of sizes to the quartermasters—that is, thus far—in the various localities?

Gen. SHARPE. Yes, sir; we have made a rearrangement of the tariff of sizes, because it was shown that in some sections, chiefly in the West, the men were very large. But you take it again in other sections, and you will find a great variation. For instance, the camp quartermaster at Camp Wheeler yesterday stated that they have some 2,000 men at that camp, and after they had issued to the men they had only left 225 coats of sizes too small for issue.

Mr. GREENE. As a matter of business experience the retail clothing trade has learned that certain men may have certain standard chest measurements or correspond in some other proportion to what is called a normal measurement. Yet there are such variations in waist measures, or in the long-legged or short-legged men, to say nothing of men with sloping shoulders and other varieties of physical formation, that they make combination sizes. For instance, they will have a 38 chest that has a certain kind of shoulder or a certain length of body, or they will make the trousers a certain size waist measure, and those trousers may be either for long-legged or short legged men. It may be found that such conditions would make desirable, and even necessary, such combination of sizes in your Army issues.

Gen. SHARPE. Take the tariff of sizes for coats alone, and you will get a good illustration of that. I think there are something like 18 different sizes of coats, and there are 32 different sizes of trousers. That is because of the cut of our coat. It is supposed to fit to the body, and that was one of the reasons in the spring—you may have seen—that there was some agitation to change the uniform. The department made recommendations in regard to a change in the cut of the uniform, that as far as the officers were concerned, because of the large number of officers coming into the service who would be buying their uniforms, that if there was to be a change in the uniform it ought to be changed then. At the same time we submitted a proposition which would change the enlisted man's garment, so that instead of having a large number of sizes on hand it was very much reduced, because there would be no attempt to fit the coat to the body, but give it a good comfortable fit for field service. But that recommendation was not approved.

Mr. GREENE. Is there sufficient play in this variety of sizes to allow any taking out, so that even though a man may not find in one of your combinations just exactly his fit, yet it can be taken to a tailor and easily made to fit him properly?

Gen. SHARPE. No, sir; there is not very much of the spare parts left in the cloth. The variations in the sizes are so large that it has not been thought advisable to give that additional cloth in the garments.

Mr. GREENE. Do you now have in the field the same arrangements that are practiced in time of peace, giving the soldier an opportunity to get his clothes changed and properly fitted by the company tailor?

Gen. SHARPE. There is very little of that done in the field, but we will be very glad to do that with the repair shops we have.

Mr. GREENE. The repair shops will take care of them?

Gen. SHARPE. Yes, sir.

Mr. GREENE. That is only in the sense that already it is apparent that many men are going without proper clothing because the sizes do not fit them, and that means a long delay in the return of the proper sizes and the reissue; and in one instance, unfortunately, the very same issues rejected came back, and I was wondering whether your experience has shown any more satisfactory way of getting the first distribution more nearly satisfactory.

You suggested that some part of this trouble was due to what you call the local situation. I suppose that may be reduced, in other terms, to the fact that either the official qualifications or the temperamental disposition of the quartermaster was at fault, can it not? One quartermaster has a way of getting a good many things in, whether he sees he is going to need them or not, and some other quartermaster is not perhaps as farsighted.

Gen. SHARPE. I think that has something to do with it; but the facts are that, as far as the cantonments are concerned, we shipped to the cantonments a certain number of articles which we knew would be required, according to the tariff or sizes, and then after that the shipments were made on the requisitions of the quartermasters for the sizes they desired.

Mr. GREENE. That was for the personnel already assembled or to be assembled?

Gen. SHARPE. Yes, sir.

Mr. GREENE. It has appeared in the testimony hitherto given that you got requisitions from quartermasters at different cantonments of posts that rather put you to some trouble, and investigation showed that some of the requisitions are based upon an expectation of thousands and thousands of soldiers who have not yet been ordered to that particular post at all.

Gen. SHARPE. It appears that they base their estimate on the troops who were to come there eventually.

Mr. GREENE. According to their understanding?

Gen. SHARPE. Yes, sir.

Mr. GREENE. Have those incidents within any of your former experience led to the consideration of the advisability of schooling quartermasters to a certain definite and standardized policy about their requisitions, so that the department may know what requisitions are intended for them? If two of them are requisitioning for troops and they know they are going to be inspected, and others are going on the theory that they might as well get all they can, it is obvious that some posts will have more than they want or need and other posts will be short.

Gen. SHARPE. The requisitions all come into the office, and when they are received they are all carefully gone over to find out what strength they are basing the estimate on. If it is beyond the known actual strength, they communicate with them at once to find out why they are basing their requisitions on that number. Maj. Hardemann can give you more detailed information in regard to that.

Maj. HARDEMANN. In submitting a requisition they are supposed to state the strength of the command, the number of articles they have in the hands of the organization, and the number of articles they have in the storehouse not yet issued, and then we know what the authorized allowance is and we take the difference. If they have more in the hands of the organization and in the storehouse than was au-

thorized, they do not get anything unless it is demanded on account of priority service over the sea, where they require two suits instead of one; or if those men are coming within a few weeks, it is held down to the lowest minimum.

Mr. GREENE. I understand, for instance, that since the Reserve Corps has been under way you have been holding quartermasters' schools. I suppose part of the purpose is not only to develop efficiency along practical lines of each individual man now commissioned in the Reserve Corps, but to standardize his methods according to your Army regulations and your policy. Would it not be a pretty good idea for some men who hitherto never had an opportunity to go to such a school? Is it not apparent that there is not any standardization on the part of some of the officers?

Gen. SHARPE. That is one of things we are taking up at the quartermasters' school at Jacksonville, Fla., at Camp Joseph E. Johnston. We are sending our officers down there and instructing them.

Mr. GREENE. The only point is, that while each one of these things seems to be an instant problem, yet their multiplication day after day disturbs not only your priority but the work of actually supplying the soldiers?

Gen. SHARPE. Yes, sir.

Mr. GREENE. How far has the War Department, in your bureau, been benefited or practically served by this volunteer spirit on the part of the women of America who are knitting sweaters and caps? Do you handle those as any part of that outfit, after it is assembled anywhere?

Gen. SHARPE. We handle those, but always at some of the ports of embarkation.

Just recently there was some organization in New York. The National League for Woman's Service, and their intention is to provide for every man who is going abroad certain things in the way of a comfort kit. They are sent directly to the quartermasters at the ports of embarkation, and they make the distribution to such men as have none of those articles already provided.

Mr. GREENE. Have you made some attempts to standardize these things, to regulate the character of them?

Gen. SHARPE. Yes, sir; they were all submitted to the office and approved before their offer was accepted. It is all done impersonally. This league does not appear in the matter at all.

Our quartermaster simply communicates with the officers of the league in New York and notifies them how many of these particular kits are desired, and they are shipped to them, and then the quartermasters make the distribution and make their reports to the league, showing the disposition made of those articles.

Mr. GREENE. That is the so-called comfort kit; is that a sort of "housewife"?

Gen. SHARPE. Yes, sir.

Mr. GREENE. That does not include sweaters or helmets?

Gen. SHARPE. No, sir.

Mr. GREENE. Do you also provide for some standardization of sweaters and helmets?

Gen. SHARPE. No, sir.

Mr. GREENE. Do you desire to have those things supplied?

Gen. SHARPE. We asked Gen. Pershing if he desired sweaters provided, and he said he did not wish sweaters, and we did not put sweaters on our list in consequence of that.

Mr. GREENE. Is it found by experience that these gifts from the women appear to supplement the Army's issue to a great advantage?

Gen. SHARPE. When they are given in the manner in which these ladies in this league are giving them now. They are given just before the men embark.

There was a great abuse in New York in that matter. Some of the organizations would go marching down the streets of New York, and one man would have none of these things and another man would have four or five attached to him, and they also found out that they had been sold in some of the shops there. But in this way in which this league does that work the distribution is made to the man as he goes aboard the ship, and if a man has one of those already he does not get another one, and there is no opportunity for them to dispose of them.

Mr. GREENE. In regard to the matter of the officers supplying their own uniform and equipment, under ordinary conditions is it permissible for an officer who is expected to uniform himself or to provide other parts of his equipment to go to the post quartermaster and buy those articles on the same terms as they are issued to the enlisted men, and then make such alterations and changes as may be necessary by reason of his rank?

Gen. SHARPE. Yes, sir.

Mr. GREENE. I understand that some time ago an order was issued which put a stop to that.

Gen. SHARPE. Yes, sir.

Mr. GREENE. Will you tell us what the reason was for that?

Gen. SHARPE. The reason was because the demands upon the Quartermaster's Department were so great that we would not have been able to supply the men.

We got an order to supply something like 6,000 medical officers, and that took from us an enormous quantity of clothing which we had to have for the men.

The law never has authorized the sale of these stores to officers and the Regulations of the Army have prescribed that when these things were on hand in sufficient quantities to justify the sale, they might be sold.

Mr. GREENE. Under existing circumstances, of course, there is a tremendous influx of officers into the service from civil life, and the majority of those men had, practically, no parts of the military equipment. There has been a tremendous demand made upon all sources of military supply for clothing and other equipment by just that kind of men, and as a natural consequence the market price for officers' uniforms has gone beyond all possible dreams.

Gen. SHARPE. Yes, sir. In consequence of that I made a recommendation to the Secretary of War, citing a case which had been brought to my own knowledge, where a particular cloth was worth about \$3.50 a yard, and the particular tailor had been buying from one of these traveling salesmen from one of the mills and he had offered that tailor the identical cloth for \$9.50 a yard. That is an increase of \$6 a yard, which the tailor will have to charge to the

officer, or whoever buys the uniform. I immediately made a recommendation to the Secretary requesting authority that we should be permitted to buy as many thousands of yards of that cloth as possible, and to sell a sufficient amount of that to each officer desiring to have a uniform made, if he desired to make the purchase, and we are now trying that cloth.

Gen. Pershing has asked for the shipment of cloth for sale to the officers, and that has been done.

Mr. GREENE. But still this situation remains, that the men, in consideration of the fact of the unusual wear and tear and demands of the service in time of war, have been taken off from their old clothing allowance and its limitations, and its effect on them, and have been put in the position where the Government will see them through, whereas the officers on whom the burden of furnishing the uniform is always oppressive, under normal conditions, are now put, not only to an unusual expense due to preparations for war, but to the enhancement of the market values of the cloth, made by the demands upon this very material by other sources.

Gen. SHARPE. It is not exactly the same material.

Mr. GREENE. It is of the same character of material.

Gen. SHARPE. The officers usually wear a little better cloth. The point is this: Under the law the President can determine whether he is going to make an allowance for an enlisted man in kind, or make him a money allowance, but there is no authority of law—indeed, there is a strict prohibition of law, as found in section 3365 of the Revised Statutes—for increasing the allowance to an officer.

Mr. GREENE. I understand, but the matter comes down to the practical point, not as to what they have been in contemplation, or any regulation which may have been made. The fact is, that because this unusual demand has been made upon the market to supply the enlisted men, the officer, who is put upon his own resources, with no Government behind to help him get it, must pay for it out of his own pocket, and he is put to all the disadvantage of the enhancement of the market price, or the scarcity of the articles themselves.

Gen. SHARPE. There is no way of avoiding that, except by authorizing us to buy some of the cloth and sell it to the officers, which we are doing. You can not give them that as an allowance, because that would be a distinct violation of law.

Mr. GREENE. I understand, and I am not speaking about that. I am speaking about what they have to pay for it.

Gen. SHARPE. As soon as the Government gets in a position where they will be able to supply the necessary issues to the men they are going to commence sales to the officers.

Mr. GREENE. By which time all the officers will have bought their uniforms.

Gen. SHARPE. We have already, on some articles, commenced to make the sales.

Mr. GREENE. Take the question of overcoats which the officers use.

Gen. SHARPE. They have made some sales of overcoats.

Mr. GREENE. The officer wants about the same character of cloth in his overcoat as is put in the overcoat which you are issuing to the enlisted man. Heretofore he used to be able to go to the post quartermaster and get an overcoat for about \$9, and get it refitted, together

with his braid and sleeve ornaments, and he was as well off as anyone else in that direction. Now he has to pay \$50 or \$60 for an overcoat, and he has to have an overcoat because it is wintertime and the regulations call for it.

Gen. SHARPE. We have had to take steps to provide for the men. The law places on the department the duty of providing for the men and not for the officers. We will allow them to buy as soon as we can get the supplies which will justify us in making the sales.

Mr. GREENE. I simply wanted to bring out the fact that there is this great difference between the two sets of men, equally patriotic, both of them going voluntarily into the service, into which they have gone for patriotic purposes, and yet the economic aspect of one of them is tremendously disproportionate to that of the other, and I wanted to find out whether or not there is going to be some prospect of early relief.

Gen. SHARPE. I hope there is to be. We are looking forward to that time very confidently.

The Secretary of War has gone quite as far as he can under the law as it now stands. There is no authority at all for selling these articles to the officers, but he has authorized it to be done by regulation.

Mr. GREENE. We also know that any department that wanted to have statutes passed before they can carry on war would be in pretty bad shape.

Gen. SHARPE. But they did not give us the reserve; that is all we are working for.

Mr. GREENE. Is there any means by which the department can get at the private retailers in the matter of sales to officers, and in any sense affect favorably to the officer the price which the retailer charges?

Gen. SHARPE. That I do not know, unless we commandeer the articles and then sell them to the officers themselves.

Mr. GREENE. Why can not you get some practical way out of this trouble? If the same sources of supply enable the retailer to have certain articles on which he can put up the price, why can you not get control of the sources of supply and keep the prices down?

Gen. SHARPE. I think Col. Wood can give you a more comprehensive and complete answer to that question than I can.

Col. WOOD. The situation which I think you refer to has been brought about by the difficulty of providing the enlisted men with the necessary woolen clothing. The enlisted men can not afford to buy their uniforms elsewhere; the officers have a sufficiently larger salary so that, although it may be a hardship, they can provide their uniforms.

The situation with respect to the cost is this: Gen. Sharpe's department could have been authorized to purchase cloth suitable for officers' uniforms and issue that to them at cost, to have them made up, but unless a different cloth was purchased it would have been interfering very much with the supply of cloth for the enlisted men, which has been continuously short since the winter weather began. If they used a finer cloth, the question of cost would still have been an acute one because the great increase in the cost of the cloth to the Army is reflected also in the finer cloths that would be used for the officers' uniforms and in all civilian clothes.

A further difficulty would exist in that after it had been issued at the cost price it would still be necessary for the officer to have the

cloth made into a uniform by a merchant tailor. The cost of making up a single uniform by a merchant tailor is so much larger than the cost of the cloth itself that the saving would be comparatively small. It requires three and a fraction yards of cloth to make a uniform. The cost of the cloth used in an officer's uniform has probably not exceeded \$4 or \$4.50 a yard at the mill. The difference represents the enhancement of the cost of the tailoring, so that merely to issue him the cloth at a wholesale price would not at all solve his problem of the expense of procuring an officer's uniform or overcoat.

Gen. SHARPE. I would like to state that in my experience the making of a garment was double the cost of the cloth.

Mr. GREENE. You suggested, however, that there might be some way by which the Government could get hold of the sources of supply, so that it might regulate its distribution and put off some of these intermediate charges which now lead to the enhancement of the price.

Gen. SHARPE. That is what we are now trying to do by buying the cloth and having it on hand for sale to the officers. Most of the tailor shops around the city have very small credit and they have to be carried by the traveling agents, and the consequence is that they charge to the officers an enormous profit over and above the cost of the cloth to them.

Mr. GREENE. In commandeering uniforms and parts of equipment from private retailers, does the department allow the dealer what the dealer has been accustomed to allow himself in profit, or does the department allow him a percentage of profit on his original cost price?

Col. HIRSCH. What we do in all cases is to notify them that we will not pay over 10 per cent on any cost price, as shown by the man's invoices. In a great many cases they actually sold them at cost price when they knew it was going to the Government for this emergency.

Mr. GREENE. These supplies were only for the enlisted men?

Gen. SHARPE. In almost all cases they were for the enlisted men.

Mr. GREENE. You said the one exception to that order forbidding the sale by the quartermasters of clothing and equipment to the officers in the service was made in the case of the Medical Corps. Was there some particular reason set forth for that?

Gen. SHARPE. There were a much larger number going abroad, and they said they could not get them in time for these troops to go abroad.

Mr. GREENE. Something was brought out recently about your allowances for wastage in clothing and equipment, and I thought that perhaps on that the record might properly show what you had as a basis of computation for war purposes as distinguished from your usual reserve stock under peace routine. I do not care particularly about having the exact figures, but what elements were taken into consideration in connection with the matter of wastage as distinguished from the ordinary wear and tear, because wear and tear under garrison routine and ordinary field maneuvers in time of peace is comparatively trifling when set up against the tremendous strain on clothing and equipment in action.

Gen. SHARPE. What we term upkeep. We were going to put that in the hearings.

Mr. GREENE. Then I do not care to take the time of the committee in reference to that now. You can explain what particular factors distinguish the so-called wear and tear on ordinary wastage which you have to take into consideration in the upkeep in time of peace and the tremendously increased proportion of wear and tear and wastage which enter into your upkeep and maintenance in time of war.

Gen. SHARPE. The upkeep in time of peace for use in this country is derived from the practice we have always had in this country during peace time conditions.

The upkeep abroad is based on Gen. Pershing's calls, and as I said yesterday, I consulted the French and English officers in our office in reference to that matter, and they told me it was about the same as their upkeep in their armies as shown to be necessary for the war. That upkeep is required because when a man comes back from the trenches his clothing must be taken off and the whole outfit is sterilized, and the man gets a bath and then passes out, and he has a renovated suit of clothes and underclothing to put on, and those which he has discarded for the time being are put through the renovator. They are repaired and used again for someone else.

Mr. GREENE. Then in addition to such things which are a part of your routine, you have to take into consideration the enormous amount of destruction of clothing and equipment incidental to action, and to the lice in the trenches, and the fact that a man starting out with an entirely new outfit in the morning, may have it all torn off in a little while, so that there is absolutely no normal and it has to be largely a matter of conjecture, to some extent figured upon what our allies have found to be a proper proportion.

Gen. SHARPE. We thought the figures were very large, but at the same time we studied what Gen. Pershing calls for, and consulted the British and French officers in our office, and they did not think the calls were excessive.

Mr. GARRETT. General, under the head of camp and garrison equipment, in this detailed statement which you have furnished the members of the subcommittee, those items seem to be divided into two classes, and a portion of them seem to be those things manufactured by the Quartermaster's Department, and the others seem to be those obtained by contract. How are the contracts let for those articles which you obtain by contract?

Gen. SHARPE. They are let now through Col. Hirsch's office, and that is the office of purchase and manufacture in Washington.

Mr. GARRETT. How have they been let heretofore?

Gen. SHARPE. They were let through the depot in Philadelphia until the office of purchasing and manufacturing quartermaster was established here in Washington.

Mr. GARRETT. Under the present system of letting these contracts, how do they arrive at what is a fair price, by competitive bidding or otherwise?

Gen. SHARPE. No, sir; we do not have any competitive bidding. That was discontinued when the war commenced in April.

Mr. GARRETT. Is the condition in this country now such that competitive bidding is an impossible thing in order to obtain equipment for the Army?

Gen. SHARPE. It was the Secretary's order of April 12, which announced that section 3907 of the Revised Statutes requiring advertisement and competitive bidding in time of war would be discontinued because the exigency was such that it was thought that was advisable. The law says "except in emergency or exigency."

Mr. GARRETT. Under the head of articles purchased from contractors, I notice there is an item for barber and toilet materials, amounting to \$1,522,074.84, and then there is another item of that character amounting to \$4,566,421. How do you arrive at that amount for this material?

Gen. SHARPE. There is a per capita figure explaining that.

Mr. GARRETT. What is that? Can you give us a statement of what those articles consist of, and the allowance for each man?

Gen. SHARPE. Some of the toilet articles are for the use of general prisoners confined at military posts and disciplinary barracks without pay and allowances, and applicants for enlistment held under observation. The regulations provide for that. Then there are barbers' materials for prisoners and applicants for enlistment while held under observation and toilet materials for use of general prisoners confined to military posts and disciplinary barracks without pay or allowances. Then there are toilet kits.

Mr. GARRETT. What are the toilet kits?

Gen. SHARPE. Those are authorized to be issued to the enlisted men under paragraph 1217 of the Army Regulations.

One razor.

One brush, shaving.

One brush, hair.

One comb, medium.

One brush, shoe.

One broom, whisk.

One brush, tooth.

One housewife.

Two towels, huckaback.

One package polish, shoe, russet.

One cake soap, toilet.

Mr. GARRETT. What constitutes a toilet kit?

Gen. SHARPE. There is a razor, a tooth brush, a shoe brush, a towel, a hair brush, and comb. I think there are two towels. They are issued to the recruits.

Mr. GARRETT. Each private has one of those kits?

Capt. DALY. Each recruit on his first assignment.

Mr. GARRETT. Does that include a razor strop, and everything necessary to keep the razor in condition?

Gen. SHARPE. There is no razor strop.

Mr. GARRETT. What character of razors are they?

Gen. SHARPE. They are razors that used to cost about 65 or 70 cents.

Mr. GORDON. Are they safety razors?

Gen. SHARPE. No, sir.

Mr. GARRETT. Was the same character of razor issued to each class of privates?

Gen. SHARPE. These razors are only issued to recruits on their first assignment.

Mr. GARRETT. What do you mean by the recruits? We are talking about making appropriations for the entire Army.

Capt. DALY. When a man first joins the service, on his first assignment he gets this kit. During the rest of his service it is not replenished or replaced.

Mr. GARRETT. Each man who goes into the service is supplied with this material?

Capt. DALY. Yes.

Mr. GARRETT. And thereafter——

Capt. DALY (interposing). It is up to him to replace it.

Mr. HULL. Do they require them to keep those materials replaced?

Capt. DALY. I am not prepared to answer that.

Col. HIRSCH. That was commenced before the war, and it was done because so many of the recruits had no money, and in order to give the man an opportunity to keep himself cleanly, and clean shaven, he was given such toilet articles as the ordinary man should have.

Mr. HULL. This was based on conditions existing prior to the war in the Regular Army?

Col. HIRSCH. Yes, sir.

Capt. DALY. It is based on the latest per capita cost for these articles supplied to the Regular Army.

Mr. HULL. In reference to the razors which cost 65 cents, how are they obtained, in large quantities? Usually a 65-cent razor is not so very good.

Gen. SHARPE. Those are very good razors. We used to pay more than 65 cents for the razor, and then we put the 65-cent razor on, and have had very good results.

Mr. GARRETT. There is an item there marked "Packing, \$9,983,489."

Capt. DALY. That covers packing materials, lumber, excelsior, specially treated paper for over-seas shipments, and for packing and shipping clothing and equipment.

Mr. GARRETT. How do you get at that amount of \$9,983.489 for that material? How do you estimate that?

Capt. DALY. That is figured on a per capita cost of \$6.13 per man per year. That is what it costs us to ship the clothing. That also includes the labor.

Mr. GARRETT. Does not each one of the privates, when you get him ready to start across the country, or abroad, have all his stuff packed up in a bundle, by himself?

Capt. DALY. When they ship from our manufacturing plant and our depots to posts, stations, and camps, there it is arranged for bulk distribution. It is put into packing boxes and sent off.

Mr. GARRETT. You hire extra help for that?

Capt. DALY. Civilians are used for that purpose, and that is included in the cost.

Mr. GARRETT. Why do you employ civilians to do the packing for the Army?

Capt. DALY. We have all civilians at our depot; no enlisted men.

Mr. GREENE. Mr. Chairman, perhaps by asking the question I am about to ask if I am correct in my assumption, it may help us to have a clear understanding in regard to any future instance that may arise.

You have to base the general upkeep and the maintenance in your department on what you call a priority system, although it may not follow that the particular articles taken care of in that pertain directly to the same individuals or personnel. It is a basis of computation, rather than the fact that the things taken in all belong to any one man or set of men?

Capt. DALY. Yes, sir.

Mr. GARRETT. The next item is simply for necessities. What does that include? Does that follow up the items of packing?

Capt. DALY. That covers the purchase and repair to machinery for use in clothing manufacturing establishments maintained by the Government at posts and cantonments, and the furnishing of equipment in connection with the operation of those machines.

Mr. GARRETT. I see you have an item there for \$2,000,000 for civilian employees. Are those employed in that packing?

Capt. DALY. No, sir; those are clerks and operatives in the manufacture of clothing, the warehousemen, storehouse men, and the men used in the handling of the supplies. It does not include the packers.

Mr. GARRETT. Have you a statement that would show the salaries paid these civilians?

Capt. DALY. That is all listed in the book of estimates.

Mr. KAHN. The men who do the packing, the men engaged in opening the cases, are under civil service, are they not?

Capt. DALY. Yes, sir.

Mr. KAHN. You call them openers and packers?

Capt. DALY. Yes, sir.

Mr. GARRETT. And you draw on the Civil Service for whatever help you need?

Capt. DALY. All of those employees are either classified as skilled laborers, packers and openers, or unskilled laborers.

Mr. GARRETT. We are having officers' training camps for everything; would it not be practical to have a school for training men in this kind of work?

Capt. DALY. They are trained at the depot where they are employed. That is the best training you can have for them.

Mr. GARRETT. What would you say of the idea of having men doing this kind of work who are within the draft age?

Gen. SHARPE. That would require a larger draft to cover all those places. These men are civilians employed in the different cities where the different depots are located.

Mr. KAHN. Are not the openers and packers at the various depots generally discharged soldiers, men of older years?

Capt. DALY. Most of them are beyond the draft age. Some of them are discharged soldiers, but only a very few now.

Mr. KAHN. But they are almost all above the draft age?

Capt. DALY. They probably all are.

Mr. GARRETT. Under the articles set out in items 258-C to 258-F, you have listed various articles, such as denim, duck, etc., and you have other things listed there, with the unit cost and the quantity, etc. In the Quartermaster General's Department, how do you arrive at that unit of cost?

Capt. DALY. That is the average price paid for those articles in the year.

Mr. GARRETT. You mean for the manufacturing of them by the Quartermaster General's Department?

Capt. DALY. Manufacture at our depots.

Mr. GARRETT. The Government manufactures them?

Capt. DALY. Yes, sir; at their own plant.

Mr. GARRETT. How do you arrive at the unit of cost?

Capt. DALY. You have reference to the materials?

Mr. GARRETT. Yes, sir.

Capt. DALY. That is the average of the cost during the year.

Mr. GARRETT. What I want to get at is this: For instance, take the article of denim, which is listed at 25 cents a yard, and the quantity given is 929,897 yards. How do you get that cost of 25 cents a yard?

Gen. SHARPE. That is the average price paid for denim last year.

Mr. GARRETT. That is the price you paid for the raw material?

Gen. SHARPE. For the denim cloth.

Mr. GARRETT. That is what you mean by the unit of cost in reference to all these articles? That is what you figure out it has cost you per yard to make up this quantity of stuff?

Gen. SHARPE. Yes, sir.

Mr. GARRETT. How do your figures for articles of the character of those made by the Quartermaster General's Department compare with the units of costs under the articles listed in items 258-C to 258-E, purchased of contractors? Do those articles cost you more when you get them from the contractors than when you get them through your own department, or do they cost less?

Capt. DALY. It is about the same; there is very little difference.

Mr. GARRETT. Then where does the contractor get any profit?

Gen. SHARPE. He gets his profit by the fact that he does not give his employees any holidays or pay for leave of absence, or things like that. Under the law we have to give so much leave of absence with pay to a civilian employee every year. These plants are maintained, with instructions as to the way in which they shall operate on certain items, like bed sacks and shirts—we are practically getting all the sacks and shirts through the Philadelphia and Jeffersonville depots, and the operations of the plant at Philadelphia are maintained to enable a requisition coming to be filled in the particular sizes that may be called for at that particular time. If you are going to get four sizes, it is going to cost you more than if you make—

Mr. GARRETT (interposing). Then the idea is that the management of the contractors is more economical than that of the Quartermaster General's department, and on account of not having to give their men leave and not paying for overtime they can make their profit?

Gen. SHARPE. They do pay for overtime, but they do not give leaves of absence. We have to give a certain amount of leave of absence to our employees.

Mr. GARRETT. How much is it?

Gen. SHARPE. Thirty days.

Mr. GARRETT. Each private is entitled to that much leave of absence?

Gen. SHARPE. These are civilian employees.

Mr. KAHN. And they also get 30 days' sick leave?

Gen. SHARPE. Yes, sir.

Mr. GARRETT. Those are civil-service employees?

Gen. SHARPE. Yes, sir.

Mr. GARRETT. By virtue of the fact that you have civil-service employees, civilians, and that they are paid for one month extra in the year, are they allowed 60 days' leave?

Gen. SHARPE. They are allowed 30 days' sick leave, but they must produce a doctor's certificate.

Capt. DALY. They do not all get 60 days. The employee who is sick and who has a doctor's certificate showing that he has been away for 30 days on account of personal illness is allowed pay for those 30 days. In addition to those 30 days' annual leave he gets 30 days'

sick leave. They all take their annual leave, and whenever an operative takes leave we must replace him by another operative. We can not shut the plant down.

Mr. GARRETT. Is it the opinion of your department that by obtaining articles from contractors in such a manner as you now obtain them, without competitive bidding, that you are getting them as cheaply as you would by having competitive bidding?

Gen. SHARPE. I think Col. Hirsch can answer that better than I can.

Col. HIRSCH. I did not catch your question.

Mr. GARRETT. The question was, Is it the opinion of your department that in getting material for the Army from contractors in the manner you now employ you are getting it as cheaply as you would by getting it by competitive bidding?

Col. HIRSCH. I think so, and in a great many cases I think we are getting it at a lower price.

Mr. GARRETT. What do you base that opinion on?

Col. HIRSCH. Taking it in the articles manufactured, we arrive at something to base it on by getting—are you speaking of materials or manufactured things?

Mr. GARRETT. I am speaking of manufactured things under this item.

Col. HIRSCH. Take, for instance, the Philadelphia depot, manufacturing a certain article. They have to arrive at a cost basis and what material it takes to make a certain article, and they go into every detail so that you can readily arrive at the figure showing the net cost of the article, figured on the prior cost of the labor and the raw material.

The next element to go into it would be the overhead charges, and that would be different, according to the profit a man would be figuring on to make, so that we can readily tell about what the limit of profit there is in it for a manufacturer.

Mr. GARRETT. What limit of profit do you allow?

Col. HIRSCH. I think they usually speak of 10 per cent. A man figures that he is entitled to 10 per cent profit, and that is considered a fair profit if the volume is not excessive. It seems to be the opinion in the trade that that is a fair profit. In a good many cases they make less and in some cases they make more. They would just simply establish a price and not endeavor to find out what the manufacturer should make.

We had the competitive bidding method in force for all articles of clothing and equipage for the supply of the Army in the fiscal year 1916. Those bids were opened on the 5th of March, and that gave us an idea as to what the value of the various articles was. The bidding at that time was unusually large. We had responses from all sections of the country, so that we had something rather definite to go on when we took up the question of purchases for the emergency. We made the emergency purchases without advertising. We were governed largely by the prices we had gotten in the opening of bids on March 5.

As the prices went up we knew from the value of the raw materials, and we could figure out in a way how much more that would

add to the cost of the articles on which bids were made at the opening of March 5.

In addition to that, wherever we found that we could get the factory in Philadelphia to manufacture a certain number of the articles at less price we did that. In that way we were able to keep in fairly close touch with what the real value might have been. We have sent inquiries out all over the United States, and we had offers from all over the United States for almost every article.

Although it was not competitive bidding in the sense that we asked for bids to be submitted, we really have had bidding, because we have had offers from all over the United States, and the different people who made the offers did not know what prices we were paying, and each man really had to be governed as to what the things cost him and what he was willing to sell them for by his own experience.

Mr. GARRETT. As I understand it, all of this material purchased from the factories is really purchased upon a cost plus a 10-per-cent basis, and then you add overhead charges to that.

Col. HIRSCH. I think the manufacturers, as a rule, figure that way. I have asked them time and again how they arrived at particular figures, and they invariably have put down the cost of the raw material as so much, and the overhead charges as so much, and then for profit they usually figure 10 per cent.

Mr. GARRETT. That is about the same basis that was used in building the cantonments all over the country, and that is a pretty well-established policy now, is it not—the method of paying for those things on a basis of cost plus 10 per cent? Is that not the way they are figuring out on all this stuff? Here is what I mean: You go to a manufacturer and say we want so many million dollars worth of stuff, and you set out the details and tell him when you want it delivered and what you want to do with it. You say what is the cost of raw material, what are the overhead charges, and then he figures his taxes, and then he gets a profit of 10 per cent on what he is making for the Government. Is not that about the way it is done?

Col. HIRSCH. No, sir; I do not think he figures in his taxes. It is simply the overhead charges of running his factory, and he does not figure on giving his employees leave with pay, and I do not think he figures in his taxes.

Mr. GREENE. Have you had any occasion at times to be suspicious of this elastic phrase "overhead"?

Col. HIRSCH. Do you mean that they were charging too much for overhead?

Mr. GREENE. Yes.

Col. HIRSCH. I think in some cases they do figure too much of an overhead, but we do not follow that, principally. Where a man comes in and asks a certain price, and we think it is excessive, in certain cases I have asked him to let me see his cost sheet, and he is usually willing to do it, and then I have called attention to the fact that I think his allowance for overhead charges is entirely excessive. I think the question depends on the volume of a man's business.

Mr. GREENE. Of course, there is an economic law that allows proper overhead charges, but in cases like this there have been suspicions that men disregard that law, as well as in many others.

Mr. GARRETT. What risk does a contractor take with the Government when you give him a contract to furnish this material? Does he run any risk of loss whatever in manufacturing this stuff for the Government?

Col. HIRSCH. I think he takes a chance on the elements of labor-cost increase, and he takes a chance in a great many cases. The Government does not furnish materials, and when he goes out to buy his materials he finds that he has to pay more money than he figured on. One thing that all the manufacturers complain of is the constantly increasing cost of labor that is going on all the time, which they did not figure on when they put in their bids. Also the raw-material market has been constantly rising ever since the emergency purchases began.

Mr. GARRETT. Under this cost-plus method, that does not enter in.

Col. HIRSCH. In the matter of clothing and equipage we did not let any on that basis; we never gave any of those out on a cost-plus basis. Some of the equipment contracts were given out that way, but none of the contracts for clothing and equipage were made on that basis.

Mr. GARRETT. Is it your opinion, from the experience you have had in the manufacture of similar articles, where you can arrive at the cost price, that the contractors furnishing this material are not making more than 10 per cent?

Col. HIRSCH. I am quite decidedly of that opinion, and also I am of the opinion that in a great many cases they are not making 10 per cent.

Gen. SHARPE. The committee has indicated from time to time that they would be glad to receive suggestions as to where conditions might be improved in the Army. I would like to suggest for the consideration of the committee the desirability of having section 120 of the national-defense act of June 3, 1916, applied in peace as well as in war, for the reason that when you are buying under public advertisements and sealed proposals it very often happens that people will not bid, because they do not care to go through the methods of operation which they have to go through, and because the quantities are small compared to what we are now buying, and we therefore are sometimes forced to buy through middlemen. In other words, we must pay the middleman's profit. I do not see why, if purchases are being made by the Government, we should not have the right to go directly to the manufacturer in time of peace as well as in war.

The CHAIRMAN. That is hardly pertinent now, unless you are expecting peace very soon.

Gen. SHARPE. But I do think it is a very important matter. I do not see why we should not go to the manufacturer and place our orders direct in time of peace as well as in time of war, and that would give us our articles at a fair and just price.

Mr. GORDON. On that question, would that not furnish a tremendous incentive for fraud on the part of the bidders, as well as on the part of the men——

Gen. SHARPE (interposing). It would take away the question of fraud.

Mr. GORDON. If you allow men in your department to go out and buy stuff they have to pay for, without competitive bidding, they might have manufacturers they might want to buy from.

Gen. SHARPE. I say, when we have opened our bids and we do not get a favorable bid we should have the right to place our orders with manufacturers in time of peace just as we do in time of war.

Mr. GORDON. You have the power to reject all bids.

Gen. SHARPE. But you do not get any further then. Different manufacturers will not bid with you.

Mr. GORDON. There is a statute in every State in this Union that requires material for public use to be purchased by competitive bid, the theory of competitive bidding being that everyone producing that material or those supplies is entitled to bid and that thereby the Government will receive the largest possible advantage from competitive bidding. That is the theory upon which those statutes were enacted.

Gen. SHARPE. Exactly. I believe in that; but the trouble is here: I do not see why there should be a combination as between and manufacturers and distributors that the Government shall be discriminated against as against some large wholesaler.

Mr. GORDON. If there is a combination, of course, you are authorized and should take the necessary steps to prevent that; and I presume you would do it.

Gen. SHARPE. You can not always prove it.

Mr. GORDON. You can prove whether the price is high or not if you know what the article is worth.

Gen. SHARPE. I still think it would be a good idea.

The CHAIRMAN. We will take the suggestion under consideration.

Mr. OLNEY. Mr. Greene brought out rather an interesting question concerning sweaters. I think in the early months of the war the War Department, as a part of the supplies, furnished sweaters to the men, but now the furnishing of sweaters to the men has been eliminated.

Gen. SHARPE. Last fall; the sweater was discontinued in 1916. We did issue some we had on hand; that is all.

Mr. OLNEY. As a matter of fact, it has been estimated that there were about 10,000,000 women and children knitting sweaters and helmets, and to do that it was estimated that they used a pound of wool a month, and that would depreciate the already rapidly diminishing supply of wool at the rate of 120,000,000 pounds a year; and these sweaters are furnished voluntarily to the Army, and the armies of all the allies are dependent upon the private enterprise of the United States. On page 42 of the bill I believe the article listed under the estimate for 1919—

Mr. SHALLENBERGER (interposing). Do you mean to say these sweaters are not desirable and that that is an uneconomical use of the wool?

Mr. OLNEY. It is most useful.

Mr. HULL. I would like to go into the question of these sweaters for a moment. Does the War Department favor the furnishing of these sweaters by the Red Cross?

Gen. SHARPE. Yes; we do.

Mr. OLNEY. They welcome any help from the private industry.

Mr. HULL. You consider them useful, of course?

Gen. SHARPE. Yes.

Mr. OLNEY. On page 42 of the bill there is an item of \$885,000,000 which provides clothing equipment for an army of 1,612,245 men,

and then there is an item below that, marked "supplemental estimate," which provides for the difference in the number of men between 3,000,000 and 1,612,245?

Gen. SHARPE. Yes.

Mr. OLNEY. Why is it that that item is so much larger than the item of \$885,000,000? Is it because the price of materials as well as labor has so largely increased?

Gen. SHARPE. The last item includes a reserve, while the other item does not.

Mr. KAHN. The sweaters spoken of by Mr. Olney a moment ago are issued to the soldiers through charitable organizations or individuals?

Gen. SHARPE. Yes, sir.

Mr. KAHN. They are voluntarily given to them by whomsoever may choose to buy or knit the sweaters for the soldiers. Do the soldiers really find use for those sweaters?

Gen. SHARPE. I imagine so, Mr. Kahn; I do not know, except by hearsay. The sweater was worn heretofore in our service in a most improper way. It was worn and made to be worn as an outer garment. But the sweater is of no use whatever as an outer garment. It must have a windbreak on the outside in order to give any real increase to the bodily temperature. If the sweater is made small enough to go under the coat it will give some protection, but that goes right back to the style of our coat. You can not get a large sweater under our coat.

Mr. KAHN. Do you think it would be appreciated by the soldiers in the service of the country if the Government furnished them with sweaters?

Gen. SHARPE. Gen. Pershing does not seem to think so. Gen. Pershing was asked about that, and he does not want them, and that is the reason we are not furnishing them. This matter was brought up two or three times, and if we were to buy them it would stop the manufacture of them on the outside, but Gen. Pershing does not want them, and we do not feel that we are justified in buying something and shipping it over if he does not want it. We are furnishing the men with the jerkin, which is superior to the sweater.

Mr. OLNEY. The cost per capita, which was so well brought out by the chairman of the committee, for clothing material, you estimated to be \$547?

Gen. SHARPE. Yes, sir.

Mr. OLNEY. Does that include gas masks?

Gen. SHARPE. No, sir; they are not furnished by our department.

Mr. OLNEY. How many blankets do you furnish per man in the Army?

Gen. SHARPE. Three blankets per man. Do you mean how many we furnish in a year?

Mr. OLNEY. I wish you would tell us how many you furnish each man in a year.

Gen. SHARPE. We furnish each man with nine in France and five to each man here.

Mr. OLNEY. So that a supply of three blankets per man would not last our Army more than two or three months?

Gen. SHARPE. Two months in France.

Mr. OLNEY. In the early contracts, is it not a fact that 35 per cent cotton was allowed in our uniform material?

Gen. SHARPE. We did allow that at first.

Mr. OLNEY. And afterwards the specifications were changed so that they were made of all wool?

Gen. SHARPE. Of noils and shoddies.

Mr. OLNEY. In the hearing before the Senate Committee on Military Affairs, I notice that reference was made to shoddy in a rather slighting way, but I happen to know that shoddy can be all wool.

Gen. SHARPE. Yes, sir.

Mr. OLNEY. Is it not a matter of fact that this substitute for wool and all-wool shoddy is just as effective and makes just as warm clothing, perhaps, as the raw wool?

Gen. SHARPE. I so understand. Col. Wood can give you more expert knowledge than I can on that subject.

I would like to say before Col. Wood testifies that the cotton was put in the blanket and overcoating because those garments belonged to the Government, and in laundering them we did not want to have them lose their size.

Mr. OLNEY. I understand that cotton decreases the shrinkage?

Gen. SHARPE. Yes, sir.

Mr. OLNEY. The uniforms, as a matter of fact, are only cleansed: they are not washed?

Gen. SHARPE. That is all.

Mr. OLNEY. They do not go through the laundry?

Gen. SHARPE. Col. Wood can give you the information.

Mr. OLNEY. In the early specifications did not the regulations read that the uniform cloth would be 75 per cent wool and 25 per cent cotton?

Col. WOOD. That was the specification prior to the change recommended by the cooperating committee of woolen manufacturers.

Mr. OLNEY. Why were the specifications changed; because they did not produce wool enough?

Col. WOOD. They thought the reworked wool was much warmer than the cotton, and when the garment or the blanket got wet it was much more readily dried out.

Mr. OLNEY. The shoddy substitute, the all-wool shoddy, makes a warmer article of clothing than the article that is made of part cotton?

Col. WOOD. Yes.

Mr. OLNEY. It came out in the testimony of one of the witnesses before the Senate committee that the German uniform as worn in the winter time is sometimes even twice as heavy as the American uniform. Is it not a matter of fact that a garment can be twice as heavy and yet not be any warmer than a closely woven piece of lighter goods, and that the thinner article can be just as warm and as serviceable and as dependable for training and fighting purposes as the heavier article of clothing worn by the German soldier, which may be twice as heavy, and may be distinctly an all-wool piece of goods?

Col. WOOD. That is true; and there is the further consideration that the soldier's woolen uniform has to be worn in France the year round, and if they are too heavy they would be very burdensome to the soldier in the warm weather.

Mr. OLNEY. Did the American Woolen Co. offer several millions yards of goods last spring to the Council of National Defense, and was their offer rejected?

Col. WOOD. I am not able to answer that question.

Mr. OLNEY. As a matter of fact, the other cloth is made out of better wool, as a rule, half blood and better wool, then the so-called Army uniform, is it not?

Col. WOOD. Not better, I should say, but finer. The term finer in reference to wool does not necessarily mean better. Fineness represents a smallness of diameter of the wool hairs, and some of the coarser wool is better wool for certain purposes than the fine wool. The wool used under normal conditions by the Army, the cross-bred wools, are stronger than the fine wools used by the Navy.

Mr. OLNEY. As a matter of fact, there was an auction of wool in Boston a week ago, when \$2 was paid for the best wool grown—the Australian wool.

Early in April the Boston Wool Association offered to the Government, as of that date, its wool supply on hand, on a basis of the cost plus 10 per cent, or at least on a fair profit basis. The Council of National Defense, or the Quartermaster General's Department, was not disposed to accept that offer. As a matter of fact, wools have gone up since that date from 30 to 40 per cent, and would not the Government have saved a matter of \$40,000,000 or \$50,000,000 in its future contracts for Army goods if it had accepted that offer.

Gen. SHARPE. A letter was addressed by the Boston wool committee to the Secretary of War and was referred by the Secretary of War to the munitions board of the Council of National Defense. Then acknowledgment was made by the Secretary to the secretary of the company, and the letter was sent to our office. We were not expected, I inferred, to do other than wait for the reply from the munitions boards.

The records of our office do not show that a reply ever was received.

In regard to the possibility of buying the wool, in order to buy wool you have to have spot cash. On the date that the offer was made we were in the condition of owing \$34,000,000 for supplies which had been bought during the preceding year for the Mexican trouble and which had not been paid for, and we had obligated the Government to spend every cent we had to the extent of \$250,000,000, and we were not in a position to buy wool, even if we had known the purchase of the wool was authorized.

We took the matter up when it was thought to be urgent to buy wool and presented it to the comptroller, and he decided that we could buy wool under our appropriation.

That was a decision rendered on June 6. We commenced buying wool in August. We did not commence buying it before August because we did not have any money.

After the first of the fiscal year, when the appropriations had not been made available, we had to borrow \$30,000,000 from the President's \$100,000,000 emergency fund in order to pay for the transportation of the Army, and we would not have had any funds to use in the purchase of wool. We did not have any such funds until some time in August, when the appropriation became available.

Mr. OLNEY. If the appropriation bill had passed the Senate last March, would that have given you the necessary money?

Gen. SHARPE. It would not have given us the sums that were required, because we would have used it and made a deficiency just the same way. That appropriation bill was only about \$28,000,000.

Col. WOOD. I think, in view of what has been said in reference to the loss to the Government in failing to avail itself of the offer which was referred to, I ought to say that I was in a large measure responsible for having the offer made.

It would have been a very fortunate thing if the Government could have availed itself of that offer, and the fact that it did not only brought into prominence the saving that could have been made; but precisely the same thing is true with regard to other articles.

If the Government had bought cotton, it would have saved a great deal of money, and that would have also been true if it had bought lumber and coal. If we could have bought all the things that were going to be needed during the fiscal year, the Government would have saved a great deal of money, and the wool question has only attained prominence because of the voluntary action of the wool merchants in having offered that wool at the terms at which they offered it, although a very wrong impression has gone out that the War Department has been negligent in regard to that offer.

Mr. OLNEY. I am sure that a precedent set by the wool association would have been followed by the Wool Growers' Association of the United States and other wool associations in granting an extension of time.

The CHAIRMAN. In that connection I think what has been said in answer to your question rather reflects on Congress for not making the appropriation. Gen. Sharpe stated that this ruling was made that they had authority to purchase wool in June.

Gen. SHARPE. In June; yes, sir.

The CHAIRMAN. That you did have the authority. Congress passed a deficiency bill on June 15, which was approved on that date, giving you \$231,000,000 for that, among other similar purposes.

Gen. SHARPE. That money was not available until after the 1st of July.

Capt. DALY. The Treasury did not make that money available for disbursement until after the close of the fiscal year.

The CHAIRMAN. Why did you not start right in as soon as the fiscal year began?

Gen. SHARPE. We did not have the money. We had to borrow \$30,000,000 from the President's emergency fund.

The CHAIRMAN. I want you to answer this question. Did Congress fail to give you, under that item for clothing, camp and garrison equipage, as much as you asked for in June last year? You got \$231,538,548. Was that all of the amount you asked for, or did Congress fail to give you the full amount you asked for?

Gen. SHARPE. They gave us the full amount we asked for.

The CHAIRMAN. They gave you the full amount you asked for?

Gen. SHARPE. Yes, sir.

Mr. GORDON. Gen. Sharpe, you say you borrowed \$30,000,000 from the President's fund. Why could you not have borrowed \$70,000,000 more which he had in his hands for just such emergencies as that, and buy this wool if it was a wise thing to do?

Gen. SHARPE. The urgency of the matter was not presented to us, that we would have to do it.

Mr. GORDON. Did they ever answer this letter?

Gen. SHARPE. I have never seen an answer to it.

Mr. GORDON. You do not know whether the department ever made a reply?

Col. WOOD. The answer to that was made by Mr. Baruch.

Mr. GORDON. Is it customary for these unofficial gentlemen to answer letters addressed to the Secretary of War?

Col. WOOD. It was addressed through him to the Secretary.

Mr. GORDON. Is it customary for the Secretary of War to turn over letters of that kind to these dollar-a-year unofficial gentlemen?

Col. WOOD. I do not know. I presume, as long as the offer was made through him, the answer would naturally be made through the same channel.

Mr. GORDON. I understood Mr. Olney to say that the offer was made directly to the Secretary of War.

Col. WOOD. It was addressed to him, but sent through Mr. Baruch.

Mr. GORDON. The Secretary of War sent it to Mr. Baruch?

Col. WOOD. No, sir; it was given by the chairman of the wool trade committee to Mr. Baruch, because he was supposed to have general supervision of the purchase of war materials. It was addressed to the Secretary of War and presented through Mr. Baruch, and answer was made through the same channel.

Mr. GORDON. You know the answer was made?

Col. WOOD. Yes, sir.

Mr. GORDON. When was the offer made?

Col. WOOD. I think it was made in April.

Mr. GORDON. Do you know when it was answered?

Col. WOOD. Within six or seven days.

Mr. OLNEY. Could not the Council of National Defense have anticipated the constantly rising prices, taking into consideration the experience of England, which, in the early stages of the war, appointed a commission to take care of the wool situation, and the example that had been pointed out by the English Government in reference to the importance of commandeering the wool supply?

Gen. SHARPE. There has been a commission appointed, and we have been buying wool ever since August.

Mr. OLNEY. Yes; but under rather unsatisfactory conditions, as far as I can learn. Is there complete coordination between the Council of National Defense and the Quartermaster's Department?

Gen. SHARPE. Yes, sir.

Mr. OLNEY. You do not think the Council of National Defense has usurped too much of the power of the Quartermaster's Department?

Gen. SHARPE. No, sir.

Mr. OLNEY. You do not think, as Mr. Gordon said, that there are too many dollar men there representing large interests?

Gen. SHARPE. I do not know what the gentlemen are representing. I do know that they are demonstrating a most excellent spirit of patriotism in the work they are doing down there.

Mr. OLNEY. In the hearings before the Senate Committee on Military Affairs I think Mr. Kaplan was interrogated to some extent. Am I incorrect in saying that it developed that a firm in which he was interested received 6 cents a pound for sorting rags?

Gen. SHARPE. His brother was interested in it. I do not know whether Mr. Kaplan was interested in the firm at all.

Mr. OLNEY. Am I correct in saying that the price charged was 6 cents a pound?

Gen. SHARPE. That was the contract price.

Mr. OLNEY. Was that sorting for colors, distinguishing khaki colors which you needed in the uniforms, or sorting out the wool rags from the cotton?

Gen. SHARPE. I do not know what the sorting consists of.

Mr. OLNEY. Is not that an exorbitant price?

Gen. SHARPE. Yes, sir.

Mr. OLNEY. I have sorted wool in my apprenticeship days, and have sorted 10 bags of New Mexican wool a day, weighing about a thousand pounds. I know the sorting of rags is perhaps a slower process, but I believe it is quite possible for women who are generally employed in sorting rags at small pay per day, perhaps at a dollars and a dollar and a half a day, to be able to sort as much as 300, or 400, or 500 pounds of rags a day. It seem to me that there was a glaring defect there.

Gen. SHARPE. The matter was recommended to us by the Council of National Defense, and was adopted by me for that reason. Later on an investigation developed the fact that the price was excessive, and the contract was annulled.

Mr. OLNEY. People may say what they please about the men in the Army being practically well supplied with uniforms and clothing, but I know as a matter of fact of more than one case where there is a noticeable lack of overcoats and extra clothing. I think those conditions exist at Camp Lee, at Camp Gordon, and Camp Sheridan, do they not, more than in any other camps?

Gen. SHARPE. No, sir. I think we had a report from Camp Lee the other day that all of the men there were equipped.

Mr. OLNEY. I want to call your attention to an individual case. Yesterday a chap died at the Walter Reed Hospital, and he had been ill at Camp Meade for a period of a week. There was a noticeable lack of ticks or mattresses at Camp Meade, which is a part of the outfit of a soldier.

Gen. SHARPE. No, sir; that is not a part of the outfit of a soldier.

Mr. OLNEY. A part of the camp equipment.

Gen. SHARPE. No, sir.

Mr. OLNEY. It does not come under you to furnish mattresses?

Gen. SHARPE. No, sir; we do not furnish mattresses in camps.

Mr. OLNEY. I know of one other case where clothing was bought by individuals waiting for supplies at the camp. Did you know that this morning there went through Washington a special train of sick soldiers, most of them critically ill of pneumonia, and that one car was attached to this train containing men afflicted with contagious diseases, and that that car was hitched to an express train and sent to Philadelphia, these soldiers coming up from the South? It seems to me where so much measles and pneumonia exist it must be due to some extent to lack of clothing.

Gen. SHARPE. I do not understand so. I understand that they have had the worst epidemic of pneumonia in New York City they have ever had, and it still exists to-day.

Mr. OLNEY. Is it a fact that at Camp Meade 7 per cent out of a total of over 30,000 men are ill to-day?

Gen. SHARPE. That I do not know. That would come under the Medical Department.

Mr. OLNEY. As a matter of fact, to revert to the wool question, speaking of this matter of price, in my experience of 20 years in the wool business, the highest price that I have seen, the price of Australian wool, was 98 cents a pound in the year 1899. The normal price is 75 cents a pound. I have reasons to believe there is plenty of wool in the world to-day—something over 2,000,000,000 pounds in all countries; but, as a matter of fact, we may lay the price of this wool to-day to certain conditions which we can not help, such as lack of transportation.

In Oregon there is 6,000,000 pounds of wool in the grease unpurchased, but it can not reach the market because of lack of transportation, there not being freight cars enough to haul it here, and yet that 6,000,000 pounds of Oregon wool would be most serviceable and useful if we could get at it.

Mr. GORDON. The War Department controls the railroads; why could they not get it out? There is no reason why they can not do that, is there, if they should need it?

Gen. SHARPE. I have never heard of that wool until Mr. Olney mentioned it yesterday. That was the first I had heard of it.

Mr. OLNEY. I want to touch briefly on the question of shoes. As a matter of fact, is it not true that in the early months of the war the regulations so read that it was possible to furnish a soldier the so-called sawdust or cork field shoe? They say if we sawed our shoe in two we would find a cork or sawdust filling in most of our shoes. I called attention of the Surgeon General's office and your office to this, and I think the rules have been so changed that there has been a substitution made of a pigskin sole. The detriment to the soldier or the sailor from an orthopedic standpoint was unfortunate, in that he had a sole on which was glued a cork and sawdust filling, glued on there by some substance which went the whole length of the sole, the theory being that the heat of the foot melted the glue and the cork and sawdust filling became dislocated and came into a lump on the pigskin sole, and from an orthopedic standpoint it was considered very detrimental by Gen. Gorgas. Has not that been eliminated and do not the regulations now read so that it has been stopped entirely?

Gen. SHARPE. Yes, sir. It was only put in on the recommendation of some of the best manufacturers we could consult on the subject. When the matter you mentioned was brought up it was changed for that very reason.

Mr. OLNEY. Is there a tendency, do you think, to favor large concerns in spite of the lower bids you receive from smaller concerns? You do receive bids but, as a matter of fact, the principle of competition is not there.

Gen. SHARPE. On some things there is competition, like shoes.

Col. HIRSCH. Are you referring to shoes?

Mr. OLNEY. Yes.

Col. HIRSCH. All the awards for shoes are really made on competitive bids. Notices have been sent out to every manufacturer in the United States, and they can bid if they desire, and the awards are made to the lowest bidders. That is one item which has been produced entirely in that way.

Mr. GORDON. Were the awards made in all cases to the lowest bidders?

Col. HIRSCH. In all cases the awards were made to the lowest bidders. In other words, notices were sent to every manufacturer in the United States, asking them to bid on a certain quantity, and the awards were made, starting at the lowest prices and going up until the committee had sufficient awards made so that they had the quantity that they wanted to purchase. The price was not always the same.

Mr. GORDON. That answers Mr. Olney's question in the negative, that you did not give any preference to the larger firms?

Col. HIRSCH. Yes, sir.

Mr. OLNEY. I know of a small firm whose bid was 100 per cent lower than the largest bid accepted, and I understand was not tested for durability but was tested for its looks. In the eyes of the layman—I saw the sample submitted, and it seemed to me as if the sample submitted was up to the specification, and yet a large rubber concern was given the contract in spite of the fact that there was a much lower bid made.

Col. HIRSCH. What particular article are you referring to?

Mr. OLNEY. It happened in reference to some hot-water bags for the Red Cross supplies. I wondered if every man had a fair chance.

Col. HIRSCH. We had nothing to do with that matter.

Mr. GREENE. Apart from the distinctively medical stores and supplies, does the medical department obtain any of its quartermaster's stores from you?

Gen. SHARPE. No, sir.

Mr. GREENE. It furnishes its own stores of that kind through its own quartermaster system?

Gen. SHARPE. They used to call them medical purveyors.

Mr. GREENE. Do they do that in reference to tentage?

Gen. SHARPE. The tentage they get from us. I was only thinking of such things as hospital cots and blankets and sheets.

Mr. GREENE. I said outside of the distinctively medical stores. Does it get any other quartermaster supplies through the Quartermaster's Department?

Col. HIRSCH. The only thing we furnish them is the equipment for the individual soldier—the clothing the man wears, the blanket he uses himself, and the bed sacks, and such things as those which the individual soldier uses. Similar articles used in hospitals, like mattresses and sheets, and all the medicines, and things that go with the surgical supplies are purchased by the Medical Department, and the Quartermaster General's Department has nothing to do with that.

Mr. OLNEY. I particularly want to emphasize the fact that I really believe that there is a serious shortage of clothing at some of the camps. Here was this particular young man I spoke of a while ago, lacking a mattress, and a part of the men have been lacking overcoats, and a good many of them have contracted bronchial pneumonia. This particular young man's parents came on here to see about him, and such a thing as that goes all over the locality where he lives, that he lacked the clothing he should have had, and the effect upon the community where he lives is enormous. It tends to create dissatisfaction and a lack of loyalty and patriotism, and a don't-care method

about winning the war, and I want to emphatically say that I really think a lack of clothing does exist, and it should be brought to your attention not only in individual cases but generally.

The CHAIRMAN. The general has admitted that.

Col. WOOD. Would not the death of Maj. Gardner, who was an officer, go a long way to show that the prevalence of pneumonia was not by any means dependent upon the shortage of clothing?

Mr. OLNEY. That is an individual case, of course.

Col. WOOD. The same conditions apply.

Mr. OLNEY. The cases of illness are very far above normal.

Col. WOOD. The variation in the ratio of pneumonia does not seem to have a direct relationship to the variation in the supply of clothing. I think a careful examination of the amount of clothing issued to the different camps will show that there is no very great difference in the situation. The variation in the prevalence of sickness has been from 9.1 per thousand to upwards of 75 or 80 per 1,000.

The CHAIRMAN. Can you show in the record how and why that is and prove that to be true? If you can, I think it would be a very important thing.

Mr. GORDON. It would serve as a great enlightenment to Gen. Gorgas, who reported to the contrary. I understood you to say that the lack of clothing had no relation to the number of deaths from pneumonia.

Col. WOOD. I would not say it has no relation. I think it has been very much overestimated. I have just recently come from Camp Hancock, and the temperature there has been probably as cold as in most of the camps, except those in the extreme North. I think probably there was in the early part of the winter less clothing and less blankets at Camp Hancock than at some of the others. For instance, I know that in the early part of December the number of blankets was less than two per man, and yet at Camp Hancock there was a lesser ratio of sickness than in any of the other camps, except Camp Meade. For several weeks ratios of these two camps were very close together, just a difference, I think, of one-tenth per thousand. One was 9.1 and the other was 9.2.

Later there was an increase at Camp Meade, because of an outbreak of measles, and a decrease at Camp Hancock.

So far as I can form an opinion from personal observation and experience there is more danger from pneumonia from an overheated condition in tents, where stoves are used, and where there is a lack of proper ventilation, and the men go out in the open air to duty after being in that overheated atmosphere than there is on account of a lack of clothing, although I do not want to minimize the discomforts which are due to a lack of clothing.

At Camp Hancock every tent is required to be opened at "taps," and the men sleep in the cold atmosphere with thorough ventilation. I think that probably had a great deal to do with the lower percentage of illness. I do not want to minimize the discomfort that the men had from a lack of sufficient clothing, but I do not think that ought to be emphasized as a cause of sickness, because sickness has applied to the officers as well as the men, and the officers provide their own clothing. It may be one of the contributing causes, but to what extent I do not know.

Mr. SHALLENBERGER. Could you not give the committee a statement showing what the extent of the shortage of clothing was in these particular camps where the greatest sickness was, and show whether there was any relation between the amount of sickness and the shortage of clothing, whether there was any relation between the fact that there was more sickness in the camp where the clothing was not the shortest?

Col. WOOD. The department now has figures as to the issue of the clothing, and there is published each week in the official bulletin a statement of the number of men who are not fit for duty on account of illness.

Mr. GORDON. And the causes?

Col. WOOD. In general the causes, and they give that by camps and cantonments.

Mr. GORDON. Where is Camp Hancock?

Col. WOOD. It is at Augusta, Ga.

Mr. GORDON. I think your statement is very important in view of the charges which have been made in the newspapers.

Col. WOOD. I think there has been great exaggeration of it. Of course, the sickness is most lamentable, but I think it is a mistake to jump at the conclusion that it has been due to a shortage of clothing and equipment. I think the men have suffered from cold, from lack of clothing and equipment, but to be uncomfortable from lack of clothing and to have sickness from it are quite different things.

The shortage of clothing was, to a large extent, unavoidable. The Government suddenly had to provide for an enormous number of men, articles which require in the ordinary course of civilian preparation, upward of six to eight months.

Cloth for civilian clothing which is worn in the winter season is purchased by the clothing manufacturers in the preceding January, and it is manufactured during the months from March to July, and is converted into garments during the period from May until September, and it is ready for delivery during the autumn.

Mr. GORDON. That is true, but I do not understand why men were seized by force and put into training camps when you were not prepared to equip them with sufficient clothing.

Col. WOOD. That is not our trouble.

Mr. GORDON. I can understand the delays, but the men ought to have been paroled home.

Col. WOOD. That has to do with policy which is formulated elsewhere than in Gen. Sharpe's office.

Mr. GORDON. To take the men by force and put them in camps when you can not clothe them——

Mr. KAHN. The Quartermaster's Department could not help that.

Gen. SHARPE. I regret that as much as anyone else, and I have shown you that I have stated from time to time that we could not provide the clothing for those men until December 31.

Mr. GORDON. There is no doubt about that.

Gen. SHARPE. But, under the conditions, I made my recommendations conscientiously. If I were Chief of Staff and the Quartermaster General made a recommendation to me such as I made to the Chief of Staff, I, nevertheless, would have ordered the troops into the camps.

Mr. GORDON. You would not have ordered them sent home?

Gen. SHARPE. I would not. I would have done exactly what has been done, because it was necessary to do that to get the psychological effect upon our enemies.

Mr. GORDON. But you drag men into camp without proper equipment; that will not help any, so far as the psychological effect is concerned.

• Gen. SHARPE. Every death which has occurred in the camps is to be regretted, but I would have done the same thing as has been done. I think the death of a man in the camp is just as much of a sacrifice for the Government as the death of a man who goes over the top.

Mr. GORDON. I do not agree with you. I think the death of men in the camps, under the circumstances which have existed, is murder. I would send them home. With all due respect to the General Staff and to the Chief of Staff, I say that the issuing of an order putting men in camps, when we are not prepared to clothe and equip them—I do not care what you may think about the psychological effects upon the enemies; we ought to have some respect for the psychological effect upon our own people, when you take so many of these boys out of good homes and put them in these camps—comes close to being murder.

The CHAIRMAN. It seems to me that is a matter which should be submitted to the heads of the War Department, and that the Quartermaster's Department ought not to be asked in reference to a matter of policy.

Col. WOOD. A question was asked a while ago by Mr. Olney in reference to the amount of knitting, and the desirability of bringing that matter under the control of the Quartermaster's Department. It has been estimated, I do not know how correctly, that there is probably used now by the civilians in this work 120,000,000 pounds of wool a year, and you realize that is equivalent to the entire American cleaning weight of wool.

Mr. OLNEY. I do. I know just what we raise in this country.

Col. WOOD. If the number of persons Mr. Olney mentioned are knitting, it does not seem extravagant to say that the number of sweaters they would knit, if they continue during the year, would be far more than all of our Army and a good part of the allies could possibly use, and they would be consuming wool which before the spring of 1919 may be badly needed in the manufacture of other articles of the soldiers' equipment. While it has been a most commendable work, there is great danger that it is going to be carried so far that the Government will be deprived of the wool for other needed things, and it seems at the present moment to be a matter that needs some regulation.

Gen. SHARPE. Several of these patriotic societies have come to me right along that line, and I have said to them that if they would knit toques—

Mr. OLNEY (interposing). And the helmets; the woollen helmets.

Gen. SHARPE. No; I did not suggest that as a substitute. I said if they would knit toques more largely than anything else it would be better, because it is such a simple thing to knit. There may be considerable difficulty in the matter of the fit of the sweaters and the stockings, but the toques will fit.

Mr. OLNEY. You do not think the sweater is a necessary article of clothing?

Gen. SHARPE. I think it needs regulation. If the heads of the Red Cross will come to the Quartermaster's Department, we will indicate to them the total quantity that will be required, and then let them restrict their activities to those quantities. I have reason to believe that the quantity of sweaters that will be knit from now on will be greatly in excess of the demand.

If you take the number you indicated, and if that number is half of 10,000,000, or less than that, if they need as much, we will set apart what is needed, so that there would not be more of these articles than there would be any use for.

Mr. OLNEY. I was only figuring that they knit a pound a month.

Gen. SHARPE. It seems to me it does need regulation, in the interest of the conservation of wool, and the heads of those organizations should ascertain from the Quartermaster's Department the total number that could be usefully employed, and then communicate with their various branches, telling them the aggregate number that should be made, and beyond that stop.

Mr. OLNEY. It amounts to a voluntary contribution of \$100,000,000 to the Government.

(Thereupon the committee took a recess until 2.30 o'clock p. m.)

AFTER RECESS.

The committee reassembled, pursuant to the taking of recess.

Mr. McKENZIE. General, recurring to the matter of clothing, is it not a matter of fact that the different standard sizes of the Army uniforms were adopted as a matter of experience rather than by chance?

Gen. SHARPE. Oh, yes, sir; entirely by experience.

Mr. McKENZIE. Is it not a fact that in ordinary times of peace, no matter whether you have an Army of 100,000 or 500,000 men, the ratio of the standard sizes that are made by the Quartermaster's Department would clothe the Army without any difficulty at all?

Gen. SHARPE. They have heretofore.

Mr. McKENZIE. Is it not also true that in time of peace the Army is raised by volunteer forces, and that the recruiting officers have in a sense standardized the recruits or standardized the men that come into the Army? By that I mean if an exceptionally tall man or a man with long legs, such as was described by some one here the other day, or a man entirely out of proportion or under size, wanted to get into the Army, notwithstanding the fact that he might be in good healthy physical condition, he would be rejected by the recruiting officer, and that the Army was made up of what might be termed normal men. Is that not true?

Gen. SHARPE. I think it is, in this way. I think the number of applicants in time of peace have usually been very much larger than the number they had to enlist, and they could make selections, to more nearly conform to the physical requirements which have been announced by the War Department.

Mr. McKENZIE. Is it not true that the Regular Army of the United States, in time of peace, was a very carefully selected body of men, as evidenced by the great number of rejections of men applying to enter the service of the United States?

Gen. SHARPE. Yes, sir.

Mr. McKENZIE. When this war came on, and the large number of men coming into the Army, both as volunteers, several hundred thousand of them, and the selective conscription act bringing hundreds of thousands more, is it not true that the careful selection that had been made heretofore was absolutely set aside, and that if a man was physically sound, regardless of his size or his peculiarities, or anything of that sort, he was certified for the service?

Gen. SHARPE. My idea about it is, that they accepted a man who was physically sound, but they did not actually set aside the physical requirements.

Mr. McKENZIE. I do not mean that they would allow a man to come in who had a defective eye, or who was physically unsound in some small way, or had some small defect. I do not mean that at all. I mean that they permitted men to come in who might be very large, or who might be undersized, compared to the men taken in in time of peace, when the men were being standardized, so to speak?

Gen. SHARPE. I think that is probably true, sir.

Mr. McKENZIE. Is it not a fact that that is one of the elements that led up to the shortage in certain kinds of uniforms, concerning which there has been so much criticism?

Gen. SHARPE. I think it is. Mr. McKenzie, Col. Wood is just back from one of the large camps, and he can give you a better viewpoint of that situation than I can.

Col. WOOD. Your statement is absolutely correct.

Mr. McKENZIE. I want to get at a fair understanding about it. I want you to have all the criticism you deserve, but I do not want you to have any unfair criticism.

Col. WOOD. That is correct, and it is also true that in normal times a very large number of recruits for the Regular Army were between the ages of 18 and 21 years, and who, while of full height, may not have been fully developed physically. The draft is taking a much older average—men from 21 to 31 years of age—who are more fully developed, and the sizes required will average larger for that reason.

Mr. McKENZIE. Is it not a fact, and would you be willing to state it as a fact, that with the standard of the men brought into the service since this war has come on, if you had followed the regular ordinary course of manufacturing your clothing in the sizes that had been adopted by the Army, that you would have had uniforms sufficient to give one uniform to each man?

Col. WOOD. Yes, sir; we would.

Mr. McKENZIE. Is it not a fact that the shortage of uniforms is due, to a great extent, to the fact that it was not so much a lack of the uniforms themselves, but that the shortage was in having the sizes that would fit the men?

Gen. SHARPE. Yes, sir. I think Col. Wood has had experience along that line, and he can give you better information than I can.

Col. WOOD. That is partly true, and it is also true that there is always a certain quantity that are in transit, and it is just like filling up the stores of retailers and distributors in the sense that they had in the beginning no articles at all which they were to distribute, and suddenly began to prepare for business. There would, in the first instance, be a certain quantity that would be absorbed in that way.

Of all that have been made, a considerable number are in transit on the railroads between the makers and the depots, and between the receiving depots and the camp depots.

Then there is another cause of some of the shortage, coming under my own observation, which was alluded to by Col. Hirsch.

There has been a practice in the issuing from camp depots of clothing, of considering a requisition closed when it was partially filled if it was not possible to entirely fill it, and then requiring the supply officer to make a new requisition. When there has been a shortage of supplies that are coming in from time to time, that has necessitated a constant making of new requisitions. That is a condition that could not have occurred under normal circumstances, where the depots always carried a reserve stock. I believe that is one of the causes of the shortage that can be corrected.

I think it is very important that among the changes made there should be one that will require that a requisition once made shall be kept alive and open until it has been completely filled, because a great deal of the time of the supply officers has been taken up in trying to find out what they still are to requisition for, and it has been complicated by closing the original requisitions before they are filled. That is a local condition.

Then, too, there is the further fact that I do not suppose any regulation can entirely obviate, that in dealing with supply officers and those in charge of the different depots the human equation enters very largely; one supply officer by his personality will be able, probably, to get his requisitions filled a little bit more fully or more rapidly than some other supply officer whose personality is less apt. So it happens, I imagine, in almost all the camps, that some of the organizations will have received more nearly their full supply of certain articles while other organizations in the same camp will not have received nearly their complete requirements. There has not been an equal distribution.

I have long urged upon those in charge in the camps where I was detailed, that the proper practice is to require pro rata allotments whenever any articles come into the camp quartermasters' depots. For instance, if there are 10,000 overcoats needed among all the organization in that particular camp, and 2,000 are received to-day, that 20 per cent ought to be allotted on account of every supply officer's requisition. That method is not followed in any camp at all.

Mr. McKENZIE. As a matter of fact, Colonel, when you get reserves of clothing on hand, this trouble will disappear?

Col. Wood. Yes, sir.

Mr. McKENZIE. Due to the fact that there are a few hundred men coming into Camp Grant at Rockford, Ill., on the 15th day of February, and the Quartermaster General's Department knowing that that number of men will have to be clothed and uniformed, and you had reserves on hand, you would not send simply that number of suits, but you would probably send a good many more than that, would you not?

Col. Wood. Surely.

Mr. McKENZIE. It is a fact, it seems to me, that the whole difficulty has arisen, as suggested by Mr. Gordon this morning, from the fact that we provided by law for the increase of the Army by increments, and also permitted volunteering to go on at the same time.

The Quartermaster General's Department had made no arrangements to take care of a certain number of men. The soldiers obtained both under the volunteer system and the selective-draft act are what you might term ready made soldiers. We had a reservoir of 10,000,000 men, and all we needed to do was to go out and pick up 500,000 of them, and say that on a day this particular man must report to a particular camp.

You have no control over that matter whatever.

To get down to the question of the uniforms, you could not call those into being from the sunlight, or from some obscure place. You had to go out and buy the cloth and have the garments made up, and that all requires some little time, and while you may be guilty of some lack of diligence—I am not here to say you are not—in my judgment the greatest mistake was made, and I believe I must be compelled to differ with Gen. Sharpe's statement made here this morning; in my judgment the greatest mistake was made, if a mistake at all, in ordering the men into the camps until the Quartermaster General's Department was prepared to take care of those men.

If it was thought best to order them out, it would have been better to have ordered them to the southern part of the country, where they could have used summer clothing, if such places could have been found. There is no doubt but that there have been some shortages, but as you have explained, they could not be helped, and I am glad to hear that by the time the next lot of men go to camp those mistakes will all be obviated, and from your statement I take it that they will be. By the 15th of February you will not only have all the men now in the field well clothed but will be prepared to take care of the increments as they come in.

Gen. SHARPE. I feel perfectly confident that we will be able to do that. We have the garments now, and have already shipped a good many of them to the camps to provide for the remaining men in the draft.

Mr. McKENZIE. I would like to suggest one thing. I received a letter from a nephew of mine a few days ago. He enlisted as a volunteer not a great while ago, in Chicago, and was sent to Jefferson Barracks at St. Louis. There he was given a suit of light clothing. I received a letter from him the other day from Fort Hancock, in New Jersey. He belongs to some battery down there to which he was assigned. In this letter he stated to me he had received a box from home, in which there was a sweater, a pair of wristlets, and two pairs of woolen socks, for which he was very thankful, because up to that time he had only received the khaki uniform. He said nearly all the boys got woolen suits, but he did not happen to get one. I presume the truth was that there was not enough to go around, and he was one of the ones who were short.

He made no complaint, but he said he was glad to get the sweater. While it may be a good plan not to knit sweaters in order to save the wool, at the present time the sweaters are very useful.

In regard to the manufacture of clothing, as I understand it, you buy the cloth and then put the cloth into the hands of the manufacturers to make it up into the different garments?

Gen. SHARPE. Yes, sir.

Mr. McKENZIE. What is your practice in regard to allowing the manufacturers salvage on that cloth?

Gen. SHARPE. We do not allow that now. Ever since last summer—up to last July or August—a number of yards would be turned over to a contractor, which would be sufficient to manufacture a certain number of garments. That lay was very carefully made in our depot at Philadelphia, to determine the number of yards that would be required to produce a certain number of garments. In the past, manufacturers have complained that sometimes the amount of cloth was not ample, but we have always held to our lay, and the cuttings which came from that cloth were obligated to the contractor.

After that we took them in and required them to send the cuttings back to us, and then we have disposed of them by sorting into the different kinds of rags.

Mr. McKENZIE. Those cuttings would have a value?

Gen. SHARPE. Yes, sir; the contractors always stated that they figured on getting those cuttings in making us the price for the garments.

But when we fixed the cost of manufacture ourselves, we considered that, too, in getting the garments back.

As you know, you gave us permission a couple of years ago to sell all those rags or cuttings and to have the money taken up into our appropriation, instead of being covered back into the Treasury as a miscellaneous receipt.

In that case we lost the value of the cuttings, and your committee gave us permission to make use of that.

Mr. McKENZIE. I am glad to hear you make a statement that you are not allowing the contractors to have that at this time, because, taking into consideration the enormous number of uniforms that are being made, and the large amount of cloth that is being used, it would, perhaps, subject the Government to some criticism if they simply gave that as additional compensation, when you are already paying these men the cost and then a profit on top of the cost.

My reason for asking that question and getting that into the record was due to the fact that I have heard that some men have made a good deal of money from the cloth. In time of peace, when we were only having a comparatively small number of uniforms made, it was not such an important item as it would be now.

Gen. SHARPE. In time of peace we did not have the right to practically fix the price at which the garment would be made. Now we fix the price and say to a man, "Will you take a contract for that price, under these conditions?"

Mr. McKENZIE. About how much was the salvage?

Gen. SHARPE. We can get the figures.

Mr. McKENZIE. That would be valuable information.

Col. HIRSCH. It would be about a half a pound on the requirements for an overcoat. They figured the cuttings would be worth about 15 cents on an overcoat and about 8 cents on a service coat. We found that that was about the value at which the ordinary manufacturer figured it—15 cents for the value of the rags after cutting out an overcoat, and from 8 to 10 cents in the case of a service coat.

Mr. MORIN. I heard recently a statement made by a gentleman to the effect that there are 4 inches allowed on an overcoat. It came

from a manufacturer near Philadelphia, and this manufacturer had told a friend of his that he had gotten a contract, and that he would have extra cloth worth nearly a hundred thousand dollars. He said he had so much cloth left over that he advertised for bids to make uniforms for private organizations, such as the Boy Scouts, and when he received the contracts for those uniforms of private organizations he made the uniforms out of the salvage left over from the cloth which was furnished him by the Government, and he practically got that much cloth for nothing from the Government.

Col. HIRSCH. Not knowing to whom you refer, I can not discuss that case specifically, but I can simply make the general statement that if that occurred, the contractor did either one of two things—he either made a misstatement or stole cloth belonging to the Government. Then, again, we went very carefully into the matter of what we would allow the contractor. The way we arrived at that was to do it after a very thorough investigation and trial. We worked that matter out completely at Philadelphia by making up garments of different sizes, to see what the yardage would be for the various garments. For instance, we found that it would take so much cloth to make up a coat and so much to make up a pair of breeches, and so much more to make up an overcoat.

Then when we gave out a contract, for instance, for 100,000 pairs of breeches in which we stipulated that so many should be 51 or 53, we were able to figure out at once how many yards it would take, according to the standard yardage that had been figured out, to make 100,000 pairs of breeches. That was the allowance that was allowed to the manufacturer receiving the award of the contract to make the 100,000 pairs of breeches. We also followed that same principle in making contracts for the manufacture of coats.

We also put into the contract that in the event that when the contracts are finished if there was any yardage left over it remained the property of the United States Government, and if the manufacturer used more yardage than that allowed by the Government, he would have to pay for it by purchasing additional cloth at the market price. The clippings and the rags belonged to him, and the only way he could get anything out of the Government would be by him cutting the coat so that he would save a little on the allowance the Government made to him. According to the terms of the contract the material left over belongs to the Government, and the contractor would either be deliberately cutting it up into rags, which would be a fraud, or stealing the cloth.

That statement holds good to-day, except that very recently the Quartermaster General made a new ruling. Some of the manufacturers said that by doing the cutting in a scientific way they could save a certain amount of cloth which other manufacturers may not be able to save from the allowance made by the Government. They said that, therefore, they thought that when a man goes to the expense and trouble of using the latest methods of cutting a garment, he should be reimbursed for that. So that in consideration of that matter it was decided that hereafter 20 per cent of the value of the cloth saved at the end of a contract would go back to the man, and the other 80 per cent of the cloth saved would come back to the Government. So there was an incentive to a man to try to save as much as he could from the allowance which the Government had

made, but he would only get it in money value and would not get the actual cloth.

Mr. GREENE. I have had occasion to see, merely as an onlooker, some of the expert cutters at work on long bolts of cloth and to be acquainted with a master cutter, and, in the way of casual information, learned, once in a while, some of the things they figure on.

As I understand it, a part of the art of the craft is to see with what economy a pattern can be figured on, in as much as the remnants themselves may be useful and not wasted. As I understand it, in case a large order come in, they figure how they can, by skillful cutting, get the most out of a certain piece of cloth, and if the cutting of the cloth for some specific garment makes a certain angle, they figure how the remaining cloth can be utilized for another part of the same garment, so that the custom cutters pride themselves with being able to show almost no waste at all in a bolt of cloth. That is supposed to be a standard of the trade, to begin with.

Col. HIRSCH. Exactly so.

Mr. GREENE. Starting with that, would you hold that the contractor shall not enter upon an obligation to cut that bolt, originally, with the least possible wastage, and that he should not be offered a premium for having no wastage?

Col. HIRSCH. I do not quite understand you. Do you mean am I of the opinion that he should not get a premium?

Mr. GREENE. Whether he should get a premium for doing what he ought to do as a matter of common business sense?

Col. HIRSCH. I personally never would have allowed the 20 per cent, but I had nothing to do with that part of it. The reason the Quartermaster General's office did allow that was because, after giving the matter consideration, they thought the Government would save cloth and would get 80 per cent of the cloth that was saved.

Mr. GREENE. I am referring to the original proposition, that it is supposed to be a matter of business in a standardized clothing establishment to save that stuff anyway, and therefore why should they now be offered a premium because when the Government furnishes the material they employ their own simple methods of economy in the utilization of it for the manufacture of garments?

Gen. SHARPE. The reason that was given was to justify the contractor in employing the most skilled cutter he could get.

Mr. GREENE. I thought that was an obligation of his contract in any event.

Gen. SHARPE. I can not say that it is. He is expected to get the number of garments out of that yardage which we know he can get from the lays that we have made. If he can employ the most skillful cutters and pay them more, he can get his compensation for the additional wages by the saving which he is going to make in the yardage. The difficulty with the individual manufacture of the cloth is that the cutters at one time were not considered as being a necessary part of the business. They really are the keystone of the business and control the whole trade to-day.

Mr. GREENE. Suppose you start a contractor off to-day with a large order in which he furnishes the cloth. He will resort to every means within his power to see that there is no wastage in the cutting of that cloth. That is his own lookout, because he is furnishing the cloth. He sees to it that the cloth is saved.

Gen. SHARPE. But he gets the best cutters he can afford to pay.

Mr. GREENE. Exactly, and for the same reason he is doing business for himself. Why do we offer a premium to men who do business for themselves by certain standard methods which would result in economies to them, to do business for the Government in time of war, when there is an extra consideration in their contract for doing the business as economically for the Government as for themselves?

Gen. SHARPE. Because we know that there is a better degree of excellence among the cutters, and we want to get the best cutters and make the saving.

Mr. GREENE. And the contracts provide that a man shall turn over to you as good work for the Government as he would do for himself?

Gen. SHARPE. I do not know about that.

Mr. GREENE. I mean that is the spirit of the contract?

Gen. SHARPE. Yes. But the man looks after his own interests, engaging his employees at the figure he can get to the best advantage for himself.

Mr. GREENE. Then it would boil down to this proposition: When he is working for himself he is doing the best he can; when he is working for the Government he wants an extra inducement to do the best he can?

Gen. SHARPE. I do not know about that, but at the same time we are giving him an inducement to get the best cutters.

Mr. McKENZIE. These men are allowed 20 per cent of the value of the clippings?

Gen. SHARPE. No, sir; not the clippings, but the yardage saved. If for instance, he gets a hundred thousand yards and cuts a number of garments out of that and saves two or three hundred yards, he is allowed 20 per cent of the value of the yardage saved.

Mr. McKENZIE. Is there a regular standard by which you can measure that? Is there a certain amount of wastage that is fixed, by rule, on each pattern?

Gen. SHARPE. You can not fix that definitely. It all depends upon the skill of the cutter in fitting the different patterns in. It depends upon the amount of time he is willing to put in in the different sizes of garments, making them fit in on the lay of cloth that he has.

Mr. McKENZIE. If the standard was fixed and a man was a careful cutter there would be but very little bonus which a man could get; but if it was fixed on the standard of some reckless cutter, he might do very well on salvage; that is, figuring on the amount saved.

Col. HIRSCH. It is figured by the cutters. The Philadelphia depot has the most skilled cutters it is possible to get. You have to allow a margin, and by the time you get through with the hundred thousand yards there may be a couple of hundred yards left over within the case of every large contract.

Mr. McKENZIE. This bonus is paid on the amount saved by the contractor over and above this margin allowed by the Philadelphia cutters, which is considered a fair margin?

Col. HIRSCH. In piece goods only; it is so stated in the contract. He can not have it in remnants; it must be in that piece.

Mr. McKENZIE. I catch the point now, that the bonus is paid on the saving rather than the wastage.

Mr. GREENE. This bolt of cloth, of standard measure, has surface sufficient, if it is cut properly, always to leave certain margins, which

may be utilized in other parts of the same or other garments being made under contract, dependent upon whether the pattern varies with the pattern for the goods; but it is a mathematical certainty if the cutter, with his electrically-driven knife, runs down through that piece of goods, always sticking to the chalk lines, he must of necessity leave just so much every time.

Gen. SHARPE. There is the very point, right there. The ordinary men in making cuttings will take his lays of cloth and will put the widest at the bottom and the narrowest at the top. He may get his patterns on the narrowest part and then cut that through. But this method we have adopted induces him to take all the various different widths of cloth and put together all of practically the same width and make one lay of that, and he will economize in that way, by figuring in the patterns on these different widths of cloth.

Mr. GREENE. That is the practice in the trade?

Gen. SHARPE. Under ordinary conditions.

Mr. GREENE. When that thing is once figured out, so that the cutter knows what he is going to do, why would not it be followed? As a matter of fact, why does it require any unusual amount of skill, after the first layout?

Col. HIRSCH. Suppose the contract is for cloth running from 54 to 56 inches. When we deliver the cloth to a man, say in 10,000-yard pieces, he gets some 54, some 53, some 56, and some 57 inches. If he spreads that on his cutting table, one piece on top of another, he will find that it cuts into the width, and a great saving comes in having the same widths, one above another. If he puts a 54 on top of a 56, and then a 55 on that, and then another 56 on top of that, you can easily see what the wastage will be. Formerly, when they got the rags the trick was to get all the rags possible out of that, whereas another man who was careful would see that the thing was carefully done. Now, with the rags belonging to the Government, they have found that there are no more tricks to put over.

The next proposition they advanced was the scientific cutting arrangement, and as a result of that the Government decided to give them 20 per cent, but I think that is not right, because I think it is a man's business, or ought to be, to make the allowance in such a way that it will be carefully worked out and will make up any error that may have been made.

Mr. GREENE. We are engaging these people by contract to do as well for the Government as they would do for themselves, and for doing that we pay them a bonus.

Col. HIRSCH. In order to be sure they will do it.

Mr. GREENE. What is the obligation of the contract, in the first place? If you consider any other article to be manufactured under a guaranty, if a man has an article which he has to sell on his own guaranty, by individual sales, he saves as much out of the material as he can and puts it into other articles of the same kind.

Now, if he does exactly the same thing for the Government as he would do for himself, he not only is to have his normal profit for the manufacture of the article, to be paid to him by the Government, but he is to have a bonus for being as honest with the Government as he is economical for himself.

Col. WOOD. I think I can simplify that a little bit. The allowance in the cutting of a jacket should be 1.834 yards per jacket, and that

has been found to be the proper allowance by the most experienced cutting they have been able to do at the arsenal.

The difference in human ingenuity and skill is such that whatever standard is adopted there will be some man who, by reason of some new method that nobody else has thought of, will do a little bit better than that standard, and that is going on all the time, and if the arsenal revises its standard and says this can be done with 1.83 yards next year, then, some one will be able to save some part of that; some part of a yard per garment again; and if you never offer any reward to ingenuity for bettering these things there is no incentive for them to be bettered.

I believe the correct thing to do is to offer such an incentive and then find out how well it can be done, let the new standard be set up as to the allowance per thousand or per hundred thousand of garments, and then some one will find means to cut still more economically, and if he comes around with a proposition that he should have a part of the saving, I would give it to him.

Mr. GORDON. In other words, it is not exactly a question of mathematical certainty in cutting this cloth, as was suggested by Mr. Greene. I think that the attitude of these gentlemen who criticize the method which obtains in this matter is based upon the theory that it is a mere matter of mathematical calculation.

Mr. GREENE. Oh, no; I can see how the margins on the cutting of the cloth uniform, whether they are half an inch or an eighth of an inch, would be useless, because there is nothing about the pattern or any likelihood of any subsequent production in which that small remnant would fit, and that sort of variation in cutting is really economy.

Col. WOOD. I think the answer to that is this: The cutting out of garments is very much like a picture puzzle. There are certain small parts cut out from the angles and interstices. One man in fitting the small parts into the interstices of the larger parts may effect a greater saving than has been before attained.

Another man may come along who will find how he can match the patterns together so that he can save a fraction more, which on the cutting of a few garments would not amount to very much, but in cutting such large numbers as the Government is having made would run into a large amount and would be worth the saving.

If I was the contractor and you would say you have been getting an allowance of 7.9 yards for a garment, and with my experience, by going to some extra expense and by doing some things that might give me or my workmen a little more trouble, I can save some of that, I am willing to do it, provided it is made worth while.

Mr. GREENE. The great trouble, you admit, was really found on the first layout?

Col. WOOD. It might happen every time it is done.

Mr. GREENE. If you have certain specified widths and lengths of cloth—

Col. WOOD (interposing). The case that Col. Hirsch has cited is probably only one of many in which they are getting the saving. If 500 pieces of cloth are in the possession of the contractor, he takes time to go through the stock carefully and select all those of 54-inch width and put those down in one layout, and then does the same with the 56 and the 57 inch widths. He matches up the cloths of

exactly the same width, so that he can cut more economically. But if there is no inducement for him to save he will put the price together as they come, the pieces of the wider widths on the pieces of the narrower widths. The department can not know how many of each of the different widths are delivered to him, because the variation is an accident of manufacture.

Col. HIRSCH. There is one thing they are doing all the time and that is revising the allowance. As soon as they find that an allowance is slightly too much, because some contractor got through a large contract and shows that he has made a considerable saving, they will see how he made that, and they will immediately revise the allowance and get that down, so that it is very hard for a man to save much, except that 20 per cent of the cutting.

Mr. GREENE. The idea I had in mind was that this width of material runs on about a certain area. Every variation is practically known, and when you have fixed your standard of layout on that proposition it is very obvious that is all the savings you make, and you will very rarely make anything further than that width. You may have great long strips, but they are something you can not use, and they have to go into the waste anyway, because the rest of your pattern was too large.

Col. HIRSCH. If you could select the 57-inch pieces in matching up the parts of the picture puzzle, you would match them up differently than if you put 54-inch pieces together. It takes a good deal of time to select the pieces of one width.

Mr. GREENE. But your 3 inches difference runs laterally, and it will not increase in width.

Col. HIRSCH. But the pieces are put in diagonally.

Mr. GREENE. But still there would be some saving out on the edge. I know that is part of the original proposition, that a cutter himself, working for himself, with his own material, tries to economize in every way he can, but when he works for the Government he insists that to do for the Government as well as he does for himself he must have a bonus.

Col. HIRSCH. To do a little bit better than the Government has ever had done for it before.

Mr. GREENE. But the Government is deserving of as good service as any citizen in it.

Mr. GORDON. The Government has to determine how much cloth is to be allowed for each garment, and it does that in a scientific way. If some fellow comes along and discovers how he can improve on that, how is there anything wrong in giving him a bonus for that?

Mr. GREENE. It seems to me that almost amounts to the same thing as trying to look for the fourth dimension, and there are so many ways of laying out a pattern.

Mr. McKENZIE. I would like to ask how the Colonel figures that the Government makes a gain on this. What does the gain consist of, on which these men figure their 20 per cent profit? How do you get at it?

Col. HIRSCH. You know what the allowance is for each garment. We do that by going according to the value of the cloth, what the Government pays for the cloth.

Mr. McKENZIE. I would like to have that made more explicit in the record, by giving an illustration showing how that is done.

Col. HIRSCH. You turn a bolt of cloth over to a contractor containing so many yards, and then explain how the Government is a gainer in the transaction, and on what you figure you will allow this man 20 per cent of what is saved. Suppose the amount of cloth necessary for the contractor to fill his contract would be 100,000 yards, according to the best estimates which the arsenal had yet made, based on its experience. The 100,000 yards are delivered to the contractor. Suppose that by some superior method of matching up the patters at the end of the contract there were 300 yards saved, and those 300 yards were worth \$3 a yard, that would be \$900. The Quartermaster Department as I understand it, would allow 20 per cent of that, or \$180 to that contractor. The cloth would be returned to the Government, and the whole amount would be infinitesimal, compared to the value of the whole contract, but it would be some inducement for a man to do the best he could on that.

Mr. McKENZIE. That would not be accomplished, however, by placing a 54-inch lay of cloth on a 56-inch lay of cloth or on a 59-inch lay of cloth, because whatever came off of the side of that bolt of cloth would be wasted.

Col. WOOD. It does not come off the side, because they can put parts of the pattern obliquely, use all the small pieces, and it is possible to utilize almost every part except the little angles.

Mr. McKENZIE. There was a great deal said about the laying of this cloth down in different widths and the saving there would be by putting one pattern of the 54-inch width on top of another pattern of the same width, and then cutting through all of those patterns of the same width, and thus making a saving.

Col. WOOD. That is one of the ways. The cloth is irregular in width, some 54 inches, and some 57 inches. It is entirely accidental as to what the width of any given piece may be. It is due to variation in the process of manufacture.

The cloth delivered by the arsenal to the contractor may vary from 54 inches to 55 and 56 inches, in the various pieces.

Ordinarily, the contractor would lay them down irrespective of their widths, and in that case the laying of the patterns would have to be within the width of the narrowest piece.

But if there is an inducement made for saving, the contractor would take the additional time, which would be quite material, to go through his whole stock, and for his first layout pick out all the 54-inch pieces and lay down 15 or 20, or whatever number of thicknesses he cuts at a time, of pieces exactly 54 inches in width; and then he would take the pieces of another width, and so on, using for each cutting pieces of practically uniform width. That would require a certain amount of additional labor, and that would be compensated for by whatever allowance was made to him out of the saving. That is only one of the ways by which saving might be made.

A skilled cutter will try all the new ways he can to save if encouraged to do so, and when he has found some way to do the work more economically he will still have the same object in view of making still further saving. That is the way all progress and improvement are generally accomplished, through incentive to individual ingenuity.

Mr. McKENZIE. Say you want 20,000 uniforms. You go to a contractor and you know how much cloth it requires, according to your

standard, to make those uniforms. You measure off that cloth and take it out of your storehouse and turn it over to the contractor, and you say to him, "Here is sufficient cloth to make 20,000 uniforms. We want you to make them. Here is our standard; you go to work." You say to him, "If you can cut those uniforms out of that cloth and save 100 or 200 yards out of it, when you have completed your contract, we will pay you 20 per cent of what remains after you get through." That is the situation, is it not?

Col. WOOD. Yes, sir.

Mr. McKENZIE. Has there been any evidence of any of these contractors undertaking in any way to skin or to cut the uniforms below that standard in any way?

Col. WOOD. Not within my knowledge.

Col. HIRSCH. To my knowledge, I can not answer that positively, and that is the reason why I am opposed to the 20 per cent proposition. That gives a man the incentive to skimp, and to make a 36-inch coat smaller than it ought to be. Whether that has been done or not, I do not know. That is one of the reasons why I am opposed to that proposition.

Mr. GORDON. Would not a proper method of inspection provide against that?

Col. HIRSCH. Yes; and probably there has been a lot of that done, but all the inspection in the world would not make it impossible for some of that to be done by somebody.

Mr. GREENE. Have your inspectors inspected the measurements of each garment?

Col. HIRSCH. Yes; they do it as well as they can. An experienced inspector can tell fairly well about that, but those garments are turned out in such large volume that it takes a great deal of careful inspection in order not to let a man get ahead of you.

The CHAIRMAN. How do you get your inspectors?

Gen. SHARPE. Through the civil service.

Mr. DAVIDSON. In this standard as fixed at the arsenal, when you turn out so many bolts of cloth and require so many outfits to be furnished by the contractor, do you take into account the difference in the width of the cloth when you turn it over to the contractor?

Col. WOOD. I do not see how they could do that, because there is no way of knowing what the differences are. They are accidental in the process of manufacture.

Mr. DAVIDSON. I would like to ask for the record a general statement on the question of shoddy. I want to know to what extent shoddy is being used now in the wool suits for the soldiers, whether it is wool shoddy or part cotton, and its effects on the heating and wearing qualities of the soldier's uniform.

Gen. SHARPE. Shoddy is used in all of the different cloths we manufacture—in the 30-ounce Melton, in overcoating, and in the blankets.

I am going to ask you to ask Col. Wood, who is familiar with the matters in connection with the shortage of wool, and who is one of the best authorities on wool matters in this country, to give you an explanation as to what is shoddy and where the objection to a garment said to be made of shoddy arose, and whether in his opinion shoddy should be used in the manufacture of clothing.

The CHAIRMAN. Before Col. Wood does that, for the benefit of the Red Cross, I wish you would state, Colonel, exactly what duties you perform in connection with the Quartermaster General's Department.

Col. WOOD. I am not a professional officer, but I went into the service through the National Guard. In civil life my vocation has been in connection with wool and wool manufacture. For many years I have been in the National Guard commanding a cavalry regiment. Unfortunately, cavalry is not required, so my command was dissolved and the personnel distributed among other commands, and then, because it had made a very good record, it was re-formed by orders from the War Department, and after being reassembled, because it was the only National Guard cavalry regiment, it was dissolved again, and I was assigned to command a regiment of engineers. Gen. Goethals learned that I have some knowledge of wool manufacture, and had me transferred to the Quartermaster Corps and assigned to his office.

Mr. GORDON. Where are you from?

Col. WOOD. Philadelphia.

The CHAIRMAN. How long have you been with the Quartermaster General's Department?

Col. WOOD. About 10 days. Such information as I have concerning the supply service is derived from experience in field service and in having my own troops clothed and equipped.

Mr. DAVIDSON. What is your experience with wool?

Col. WOOD. It has been my principal vocation for the last 30 years.

Gen. SHARPE. I would like you to ask Col. Wood to explain about the materials used.

Col. WOOD. I have some samples that I think will tell you more in a few minutes than I can tell in a long time.

Two or three years ago there was pending before the House a labeling bill, for the purpose of requiring that all garments should be labeled as to their components.

The CHAIRMAN. Were you a manufacturer?

Col. WOOD. I was for a long time an official in a manufacturing organization, and up to the time of my going on active service I was president of the National Association of Wool Manufacturers, but I am not actively, personally identified with manufacture at the present time. At the time this labeling bill was before the House, representing the Association of Manufacturers, I gathered together quite a number of samples for the Committee on Interstate and Foreign Commerce, for the purpose of illustrating the components of civilian clothing, and when I was called before the Senate committee, thinking I might be asked some question upon this subject, I sent for this collection of samples. It was not prepared for this particular purpose, but most of the samples will serve to illustrate what you have asked about.

Confirming Gen. Sharpe's impression as to how this prejudice arose, I think I may say, historically, that it probably came about in this way:

The process of finishing the woolen cloth involves, in the last stage, the passing of the cloth between revolving knives, which trim off the surface to give a perfectly uniform face. What is cut off is scarcely more than dust or powder, but it still retains the quality which wool

has of felting. This waste is called flocks. It is possible to make of a very flimsy foundation fabric a close, compact piece of cloth by filling it with these flocks during the process known as fulling, in the course of which the cloth in a wet state is passed under a heavy block with a pounding action. In this way a quite sightly piece of goods can be made which, however, has but little durability.

The tradition is that during the Civil War a good deal of cloth was made in that way by unscrupulous manufacturers. The cloth in wear became poor and thin and was not very serviceable. Experience of soldiers who received clothing made of such goods was carried back to their home communities and caused a widely diffused belief that any goods containing other wool fiber than virgin wool was unserviceable and an imposition upon both the wearer and the Government. That impression has survived to this day, though few of the present generation have ever seen any goods of that sort.

Reworked wools are of many sorts and some of them are much better than some kinds of new wool. They grade all the way from very fine long fiber, which is much better than a great deal of new wool, down to the other end of the scale, which is a very poor and perfectly useless material.

Realizing that there would be a scarcity of wool, owing to military requirements, and taking cognizance of the experience which England was having, it seemed to the committee of wool manufacturers who have been advising the department of these matters that it was important to begin the conservation of wool as early as possible. So the committee recommended that there be used of reworked wool 35 out of 100 parts in the blankets and in the overcoating.

But in order that the quality of the garments should be kept up to a useful and serviceable standard, they prescribed that the tensile strength of the cloth should be such as would insure the use of none but good fiber in this reworked wool. Unless fiber of satisfactory quality is used, the cloth would not stand the strength tests, which are prescribed and applied by the department to all purchases. That much it is necessary to understand in a preliminary way.

The samples which I have here will illustrate the fact that the use of the reworked wool is as much of an economic necessity as the use of scrap iron. A great deal of reworked wool has never reached the stage of cloth, such for example, as waste ends of yarn. That is the reason that those in the trade have used the term reworked wool, which some of the newspapers seem to think is camouflage for shoddy. It is not at all.

The term has a very definite meaning. Reworked wool is such as has passed through any stages of manufacture, however slight, and subsequently restored to its original condition of separate fibers. Shoddy has reached the stage at least of cloth, if not garments. And at this point it might be well to say that the shoddy which has been authorized in the Government goods is chiefly made out of the clips from new Government cloth that you have discussed, and not from the rags of old garments. It is largely made from the clippings which have been discussed here, in your consideration of the saving in the cutting of the goods.

Mr. SHALLENBERGER. Did you make this statement before the other committee?

Col. WOOD. I did not, because I was not asked to.

These [referring to samples] are clips from new blue worsted cloth. They are tailor's trimmings. This is the shoddy made from those clips [exhibiting]. If you pull that apart you will see it has the fiber, length, and strength to be very useful.

This cloth is made for women's jackets, of 100 per cent shoddy [exhibiting cloth]. There is nothing but shoddy in it, and you will find it is a very strong, useful, and serviceable cloth.

Mr. DAVIDSON. Of shoddy?

Col. WOOD. It is all made up of the clippings I showed you first.

Mr. GORDON. What is the process of manufacture?

Col. WOOD. It is put through a machine covered with strong steel teeth, which revolve very rapidly and pull the fabric apart until it is reduced to the original fibers.

This is a sample of a finer quality of shoddy than that which I have just showed you. That is much better than a great deal of new wool [exhibiting sample].

Mr. GORDON. Is this manufactured from cloth?

Col. WOOD. I can not tell the exact source of that. It may have been either from cloth or from knitted articles. From its fineness I would judge it was probably made from knitted articles.

Next is another sample of very fine shoddy—high-priced shoddy—costing more than a good deal of new wool.

Here is a sample of thread waste [exhibiting]. In the process of manufacture a certain amount of waste yarn occurs—broken threads—is made from very superior wool. Unless that can be used over, it would be a loss of so much wool to the world.

This next sample is the same material after it has been put through the machine that brings it again into its original condition [exhibiting]. That is very much superior to a large amount of new wool.

Mr. DAVIDSON. In what way?

Col. WOOD. I shall show you some samples of inferior wool and you will readily see the difference.

Mr. DAVIDSON. I wanted to find out what has happened.

Col. WOOD. Because it is longer in staple than some wools, and a great deal finer in fiber than a good deal of the coarse wool. It will make fabrics that the coarser wools will not make at all.

At another stage of manufacture there is waste produced from what is known as roving, which is from the stage of manufacture just before the spinning. It makes a very superior kind of re-worked wool. These would not be termed shoddies, but they are reworked wools, after they are reduced to their original condition.

This sample is broken top [exhibiting]. The very first stage in the manufacture of worsted is to comb the wool and there is a certain amount of waste there. Broken top is worth more than the clean new wool from which it was made.

Mr. QUIN. What does the wool top come from?

Col. WOOD. From the first stage of manufacturing raw wool into worsted yarn. The wool is put through a machine called a comb, which separates all the short fibers from the long fibers. As you undoubtedly know, some of the sheep hairs are long and some are short. In one system of wool manufacture known as the worsted

process the longer fibers are separated from the shorter ones, the long ones being used in the manufacture of worsted yarns and worsted cloths. The shorter fibers are called noils. This top is superior to new wool because all the short fibers have been removed from it.

Mr. SHALLENBERGER. Why do they permit it to go as waste?

Col. WOOD. In some mills it is worked back into the same machines. In others, where the length of the staple must be preserved to the greatest degree possible, they prefer to sell it for use in other kinds of goods. But when they do sell it, it brings more than the price of the wool out of which it was made.

The next sample shows the short fibers that have been combed out of the same wool the top was made from. This has not been cleansed at all, but it is new wool. It could not be called shoddy. It has never been through any process of manufacture except the mere separation from the longer fibers that made the top.

Mr. GORDON. What makes the difference in color?

Col. WOOD. It has not been scoured. This sample is the same thing I have just shown you—noils—but it has been carbonized. It has been treated in a diluted bath of sulphuric acid, and then subjected to a very high temperature, which removes all the vegetable matter which gets into the sheep's wool. Carbonizing also occurs where any piece of fabric which has cotton in it is treated with the sulphuric acid bath and submitted to a high temperature.

I will now show you two or three samples of new wool. This one would pass any strict definition of new wool. It has never been manufactured at all; it is straight from the sheep's back.

The sheep are shorn usually in the spring of the year, but they are slaughtered the year around, and so it happens that some sheep are sent to the butcher shortly after they have been shorn, and there is taken from the pelts of those sheep the wool that has been left from the shearing or what has grown since the sheep were last shorn. This is absolutely pure wool, and yet it would make a very poor garment. The cloth would not have the necessary strength or durability, because the fibers are so short—shorter than many kinds of shoddy.

Mr. DAVIDSON. Is that called pure wool?

Col. WOOD. It is, in the sense that it is taken direct from the pelts of the slaughtered sheep. Wool that is taken from the pelts of slaughtered sheep is known as pulled wool.

Here is another specimen of pure wool that is not very good. In sorting the wool the sorter cuts off all that part which he knows will not work satisfactorily, and that is sold to people who make a business of treating it with chemicals to cleanse it, and they get a very short fiber wool, which at the best is quite dirty and not very good. It is brand new wool, known as tag locks, and if it is made into soldiers' clothing they would be getting pure wool, but the clothes would not be durable.

This lot is a still different sort of pure new wool. They usually mark the sheep with paint for the purpose of identification. Almost any other marking is washed out by rain. That paint can not easily be removed, so when it comes to the mills it is necessary to cut off the part where painted, and that is sold at a low price. Those who buy it "reclaim" it by special cleansing and make it useful for some purposes, but it is very poor wool. That would be brand new wool, but

very inferior to the shoddies that are so much condemned and so ignorantly condemned.

Here are samples of fabrics containing various proportions of shoddy [exhibiting]. If you refer to the numbers I can tell you the proportion in any of them, and you can test the cloths for strength.

Mr. MORIN. The first number is 109.

Col. WOOD. That is 25 per cent cotton and 75 per cent shoddy; no new wool at all. You can pull them and test them. They make a great deal cheaper clothing than cloths of all good quality new wool.

Mr. MORIN. The next one is No. 139.

Col. WOOD. That is 52 per cent cotton and 48 per cent of worsted; the worsted is of a fine grade of wool.

Mr. GORDON. That is more than half cotton?

Col. WOOD. Yes, sir.

Mr. MORIN. The next one is No. 66.

Col. WOOD. That is made wholly of pure new wool. These were made up in 1914. The prices are of that time, when all wools were very much lower in price than now. That cloth was \$2.

Mr. GORDON. A yard?

Col. WOOD. Two dollars a yard.

Mr. GORDON. How wide?

Col. WOOD. Fifty-six inches.

Mr. GORDON. That is pure wool?

Col. WOOD. Yes, sir.

Mr. MORIN. The next number is No. 99.

Col. WOOD. That is made wholly of shoddy and is 47½ cents a yard.

Mr. MORIN. The next one is No. 169.

Col. WOOD. That is 70 per cent cotton and 23 per cent worsted, and the price of it was 85 cents.

Mr. MORIN. The next one is No. 199.

Col. WOOD. That is pure wool, and the price was \$1.375. That is a lightweight or summer cloth. These are all mill prices.

Mr. MORIN. The next one is No. 33.

Col. WOOD. That is 25 per cent wool and 75 per cent shoddy, and the price is \$1.25 a yard.

Of this group, excepting the one marked four, all are partly wool and partly shoddy, or partly noils, such as I showed you here. This next is a fabric I do not know the exact components of and the next is made of pure worsted wool of long staple, and yet I think you will realize that although of pure wool it is worthless.

Mr. GORDON. Why is that?

Col. WOOD. The raw material is all right, but the art of manufacture is at fault. You can see through it. This cloth clearly shows that it is no certificate of character to say that a fabric is all pure wool.

Here is another fabric which is not all wool [exhibiting]. It is about one-third cotton and two-thirds shoddy, but it will give much better service, so far as durability and warmth are concerned, than the sample of pure wool goods I have just before shown you.

It is only necessary to add that in testing the various samples of goods containing high-grade shoddy and reworked wool, the committee which investigated the matter last spring, after having made a large number of samples, especially for the Quartermaster's Department, determined that heavy overcoating cloth, made with a

proportion of 35 per cent new wool and 35 per cent reworked wool would give a durable, substantial, and warm cloth, and better than cloth made of 70 per cent wool and 30 per cent cotton, of which latter there had been some made for the Army.

The committee concluded that a blanket made of 65 per cent new wool and 35 per cent of a good quality of reworked wool would give a strong, durable, and warm blanket, and I can testify that such a blanket is durable and strong and warm, because I have been sleeping in such blankets in camp during the severely cold weather of the past few weeks.

They decided that a shirting flannel, an excellent cloth, and one that would have wool, and also, incidentally, avoid some of the trouble of shrinkage in washing, could be made with a fine cotton yarn for the warp and all wool for the weft, or cross threads. And the committee so recommended.

They said it would be better to make the uniform cloth, the 16-ounce Melton, of all new wool, because it would be more difficult to use the sizes of yarns of the required strength out of the combination than to make larger-sized threads out of which the blankets and the overcoats are made. They stated that if the necessity for conserving wool should later become more serious, that then they would advise that the uniform cloth be made of all worsted in the warp and a proportion of reworked wool and new wool in the weft, but until that should seem necessary they advised that this cloth be made wholly of new wool instead of with 25 per cent of cotton, as had previously been done. I believe that the specifications were adopted in accordance with those recommendations, and I understand most of the cloths and blankets bought, except some of the emergency purchases, has been in conformity with the committee's recommendations.

Mr. GORDON. Were you a member of that board?

Col. WOOD. Yes, sir; I was chairman of the committee.

Mr. GORDON. You concurred in that recommendation?

Col. WOOD. Yes, sir; I did.

Some recommendations were made to the Navy Department. In the Navy the fabrics are of an entirely different class of wool. They use very expensive wools and make expensive garments. They were using overcoating made of the very fine wool, not in point of durability but very fine fiber. The cloth was of beautiful appearance, and it was finished in a most expensive way. It has a face finish like broadcloth. An overcoat of that kind, such as was given to the enlisted men in the Navy, is a more costly overcoat than most of you probably habitually wear.

We thought, in view of the necessity of conserving wool, it was advisable to adopt one that would be just as durable, just as warm, and less expensive, and so we recommended the same proportion of 65 per cent and 35 per cent and a lower grade of wool—not a poorer quality but a coarser fiber—as being stronger and more durable.

I believe before I left this work they did officially adopt that recommendation and that a lot of the material was so made, although I understand that at the hearing before the Senate committee the head of that bureau announced that the Navy had never used any reworked wools of any kind. As a matter of fact, the topcoat cloth is being made exactly in that way, and I understand they have had

no complaints at all, and I take it that that is a great tribute to the excellence of this very much maligned article, reworked wool, and the War Department can share the credit claimed for the Navy in respect to its cloths.

Gen. SHARPE. May I ask Col. Wood to explain the difference between fleeced wool and pulled wool?

Col. WOOD. Fleece wool is the wool shorn from the live sheep usually in the spring, although in parts of California and Texas they shear the sheep twice a year. But that applies to a very limited extent. Most of the sheep in the United States are shorn but once a year.

Fleece wool is not scoured. When cut from the sheep it is full of the natural grease or oil, and of dust and dirt absorbed on the roads and in the fields over which the sheep travel, so that the larger part of the fleeced wool as shorn from the sheep is dirt.

When scoured the clean wool is in varying proportion to the whole. For example, where most of our wool comes from, in the intermountain country—Montana, Idaho, Utah, and Wyoming, and parts of the Pacific Slope, out of every hundred pounds of wool as it is shorn from the sheep there are only about 30 to 40 pounds of clean wool. The rest of it is dirt and natural oil from the sheep. In some parts of the country the proportion is very different.

The bright wools of Virginia and West Virginia and Tennessee only shrink about 50 or 55 per cent, and sometimes under 50 per cent; from 45 to 55 per cent of clean scoured wool from the hundred pounds of wool as it comes from the sheep.

Pulled wool, as has been mentioned before, is that which is taken from the pelts of the slaughtered sheep, and it varies in length according to the period of time that has elapsed since the shearing. It is all classified by the dealers and sold according to its length of staple and fineness of fiber, and for the various uses to which it is applied it is as useful as the fleece wool, but comparatively little of it can be used in the worsted branch of the industry, which requires the longest staple.

Mr. DAVIDSON. Can you tell us whether there is any wool, as distinguished from shoddy, reworked wool as distinguished from shoddy, being used in the clothing furnished the soldiers? The general impression in the minds of the people is that this shoddy is not good for anything.

Col. WOOD. Shoddy is anything which has reached the stage of cloth and been reduced to a fibrous condition from cloth. Reworked wool really includes shoddy. That is the more general term; it is inclusive of shoddy, of broken tops, of garnetted threads, of anything at all that has once been partly or wholly manufactured.

Mr. DAVIDSON. That is the general term?

Col. WOOD. Yes, sir.

Mr. DAVIDSON. What is the percentage?

Col. WOOD. Sixty-five per cent wool and thirty-five per cent reworked wool in overcoat cloth and blankets.

Mr. DAVIDSON. And the 35 per cent of reworked wool that is put in the soldiers' uniforms is of the class of wool distinguished from the generally accepted term "shoddy" in that it has more fiber?

Col. WOOD. Distinguished from what the popular mind thinks of shoddy, which is really flax, so short as to be worthless stuff.

Mr. GREENE. There is still in this 35 per cent some wool which has once been cloth?

Col. WOOD. This 35 per cent is almost wholly clippings from the uniform cloth which have been saved.

You referred to uniform cloth. I ought also to say that this has not yet gone into uniform cloth. The uniforms themselves, except in some emergencies, have been made of all new wool. It is the overcoats and the blankets in which the 35 per cent was recommended and has been used. I shall have no hesitation in recommending, if the necessity arises, if wool becomes too scarce and too high in price, that in the weft of the uniform a proportion of the reworked wool be used also.

I do not believe that the necessity has been reached. It has been reached in Germany, and it has been reached in England. In England, for instance, they are gathering in not merely these clippings but the clippings of old clothes. In Germany one of the witnesses before the Senate Military Committee stated that no shoddy or reworked wools were ever used in the German uniforms. One of the English textile papers stated early last year that an analysis made of some of the uniforms taken from German prisoners showed that the cloth was made of 40 per cent cotton, 20 per cent paper yarn, and 40 per cent rag shoddy.

Here are clippings from the Army overcoat cloth. [Showing sample.] They are torn up and made into this material [exhibiting another sample], and that is the material which is so much talked about—the shoddy in the overcoats and the blankets.

Mr. HARRISON. How does the warmth of that compare with the warmth of all-wool goods?

Col. WOOD. It is just as warm.

Mr. DAVIDSON. And the percentage is not sufficiently large to affect the wearing quality?

Col. WOOD. No. That is determined very largely by the strength test. We have had tests of strength for this cloth, which have been very much more severe than the tests for the civilian garments of the same kind. The Government overcoat is a great deal stronger than almost any civilian overcoat you would buy in a retail store.

Mr. DAVIDSON. Any protection which the Government has against an undue proportion of shoddy is the strength test?

Col. WOOD. Yes, sir; the protection the Government has against an undue proportion of shoddy or poor quality of shoddy is the strength test. That would prevent the manufacturer from putting in an inferior grade of shoddy, and the Government has inspectors at every mill whose business it is to see what materials go into the mixtures.

Mr. QUIN. What is the relative lasting quality of the shoddy substitute as compared to the regular wool garment?

Col. WOOD. It would be idle to say that a garment made with 35 per cent shoddy is as strong as one made of 100 per cent of the best wool. If that were true, and there was an abundance of new wool, there would be no purpose in using shoddy. The cloth is more lasting than the garments into which it is made. It is like many of the samples of civilian cloths that I exhibited. Cloth will still be just as serviceable when the garment has gotten so old and out of shape that the wearer does not want to wear it any more.

Mr. QUIN. And will it give the soldier as much warmth?

Col. WOOD. It will give the soldier as much warmth.

Mr. QUIN. Then all this stuff in the newspapers that we have seen about it being inferior is all rot and nonsense.

Col. WOOD. It is absolute nonsense.

Mr. QUIN. Your testimony is that it will last as long or longer?

Col. WOOD. It will last as long as the garment itself will be useful.

Mr. QUIN. What is the difference in the cost per yard?

Col. WOOD. It would be difficult to answer that, because I have been away from the market for some time, and I can not say now. But in a general way I can say that just before I left for active service I saw the prices on the old ordnance blanket; that is the blanket put under the saddles of the mounted troops, it weighs 5 pounds, and the cost of that blanket, at the then current price of wool, was between \$11 and \$12. But if made in the proportion of 65 per cent to 35 per cent, my recollection is that the figure was a little under \$8.

Mr. QUIN. Will you put that exact difference in the record?

Col. WOOD. I will be glad to do so if I can find the particulars which I then had, now several months ago.

MEMORANDUM FOR COL. DALY DATED FEBRUARY 4, 1918.

The difference in price would vary somewhat in the computations of different mills, and at various times, according to variations in costs of production, but the following averages are believed to be a close approximation of the differences in cost of the respective fabrics at this time:

Thirty-ounce overcoating: Approximate difference between a fabric made wholly of new wool and one made of 65 per cent new wool and 35 per cent reworked wool, would be about \$1 per 6/4 width yard. Purchases to date, 22,802,874 yards, \$22,802,874.

Three-pound blanket: Approximate difference in cost between one made of 100 per cent new wool and one made of 65 per cent new and 35 per cent reworked wool of same grade of stock, \$1.58 per blanket. Purchases to date, 18,738,757 blankets, at \$1.58, equals difference of \$29,607,236.06.

Eight and one-half ounce shirting flannel: Approximate difference in cost between the all-worsted fabric and the one made with cotton warp, and worsted weft, quality of the wool in each being the same, 45 cents per yard. Purchased to date, 36,522,579 yards at difference of 45 cents, \$16,435,160.55.

Total estimated difference on orders to date, \$68,845,270.61.

Sixteen-ounce uniform cloth: At the beginning of the war this cloth was made of a blend of about 75 per cent wool and 25 per cent cotton. It was recommended to the department in April or May, 1917, by the woolen committee that the specifications be changed to all new wool, which was adopted, and except as to certain emergency purchases of relatively small quantities, all of the 16-ounce uniform cloth contracted for since that time are for the all-pure new wool construction.

(Inquiry received by woolens section February 4, 1918. Data obtained by woolens section February 9, 1918. Reply forwarded by woolens section February 11, 1918.)

FEBRUARY 9, 1918.

Mr. QUIN. I had the impression from what has been printed in the newspapers that this was a very inferior cloth, and I presume the majority of Congressmen have the same idea. We want the facts about it.

Col. WOOD. I can tell you in a general way with regard to the overcoats. The overcoat at the time—this was for the 30-ounce cloth—and the price at most of the mills was \$3.50 a yard, made in the proportion of 35 per cent to 65 per cent. My recollection is that the price of 100 per cent wool would have been about \$4.45 a yard.

Col. HIRSCH. At the March opening our requirement under the old specifications was 75 per cent wool and 25 per cent cotton in the overcoating, and our price then was about \$3.25. When we continued the emergency purchases during the month of April, the price ran almost up to \$4. That was for 75 per cent wool and 25 per cent cotton in the overcoating.

Mr. QUIN. To what do you attribute that rise in price?

Col. HIRSCH. The increase in the price of both wool and cotton.

Col. WOOD. I think this ought to be brought out quite clearly, that at the time of the change the department was buying overcoat cloth made of 75 per cent wool and 25 per cent cotton, and the lowest prices which they had been able to obtain on that were higher than the price that was finally obtained on the 65 per cent-35 per cent combination, which is all wool, and warmer, and which enables the soldiers' clothes to dry out more quickly when they get wet in the rain.

Mr. QUIN. What percentage of shoddy substitute has been secured by the Quartermaster General's Department for all of the cloth used for overcoats, uniforms, blankets, etc., supplied to the Army since the declaration of war?

Col. WOOD. I have not those figures. I can say that none of that was in the uniforms. They have been made of all new wool.

NOTE.--No shoddy substitutes were used in the 16-ounce meltons for suitings or in the shirting flannel for shirts. The following shows the approximate percentage that the purchase of substitutes in 30-ounce meltons and blankets bears to the total quantity purchased from March 5 to December 31, viz:

Thirty-ounce meltons: Sixteen per cent, 75 per cent wool, 25 per cent cotton; 67 per cent, 65 per cent wool, 35 per cent wool substitutes; 17 per cent, 50 per cent wool, 50 per cent wool substitutes; 90 per cent, 65 per cent wool, 35 per cent wool substitutes.

Blankets: Ten per cent, 75 per cent wool, 25 per cent cotton.

Col. HIRSCH. In the blankets and in the overcoating it is 35 per cent of the weight of all purchases made since that time, which was in April.

Mr. QUIN. The other matter you have not in mind now, but you will put that in the hearing?

Col. WOOD. Yes, sir.

Mr. QUIN. The record shows, Gen. Sharpe, that Congress gave your department all the money that you or the department asked of Congress last year for uniforms, clothing, overcoats, blankets, and so on; is that correct?

Gen. SHARPE. No; I think not.

Capt. DALY. They gave us all the money asked for in the emergency deficiency estimate, but in the estimate of October 6 they cut what we asked for.

Gen. SHARPE. There was not much of a reduction; only \$7,500,000.

Mr. QUIN. This committee gave you all you asked for?

Gen. SHARPE. Yes, sir.

Mr. QUIN. Did you use all of that money for those articles?

Gen. SHARPE. Yes, sir.

Capt. DALY. And \$300,000,000 more.

Gen. SHARPE. There is a deficiency now of \$310,000,000, I think.

Mr. QUIN. If you had gotten all the money you had asked for, would you have needed any more?

Gen. SHARPE. Yes, sir. The deficiency was created by making the purchases in order to keep the factories in operation, purchases running until the 31st of December, 1918.

Mr. QUIN. General, as I understand it, you foresaw that you could not equip all of the National Guard and the Regular Army and the 85 per cent of the 1,000,000 drafted men whom the War Department ordered to be in camps in September, and you notified the Secretary of War of that fact, I believe. That is your evidence, is it not?

Gen. SHARPE. Only 500,000 drafted men.

Mr. QUIN. I understood they took above the allotment of 500,000. There was something like 556,000 men; but the draft does not include a million men yet.

Gen. SHARPE. We reported on the 13th of March that we could equip the National Guard and the Regular Army by July 31, but that it would take us until December 31 to equip the other 500,000 men in the National Army. We made the same report on April 2 and April 16.

Mr. QUIN. Did you make any report in regard to that later?

Gen. SHARPE. Yes, sir; we made one on July 21 or July 27, I think, stating that we could not take care of more than 100,000 a month after September.

Mr. QUIN. How many men did you tell the Secretary of War you could properly equip?

Gen. SHARPE. We said we could take care of 100,000 a month after the 1st of August; commencing in September we could take care of 100,000 men a month.

Mr. QUIN. What date was it when you made that statement? You knew how many had volunteered and been accepted in the Regular Army at that time?

Gen. SHARPE. No; those numbers were very disturbing, and also that calculation, just as the last enlistment in December was. We expected about the 1st of December we would have clothing assembled in the camps to clothe the last of the draft to be called but there were some 70,000 men who enlisted between the 1st and the 15th of December, and the same thing occurred last June. There was a very large increase in the number of enlistments.

Mr. QUIN. Of course, you had no way of knowing, nor did the the War Department have any way of knowing what a severe winter we were going to have?

Gen. SHARPE. No; and we could not tell about the number of people who would be willing to enlist.

Mr. QUIN. I do not want to be hostile in criticism of the War Department at all, but you stated that the Secretary of War or the General Staff were right in putting these men in the camps without proper clothing, and with all this cold weather on us. I do not agree with that. You said the reason for that was the psychological effect it would have abroad. What countries, or nations, did they have any psychological effect on, and what was the effect?

Gen. SHARPE. There was not any intention of sending the troops abroad until this year.

Mr. QUIN. What mistakes have been made we can not help and I do not want to condemn anybody. But I do want to say in reference to this matter, there is a psychological effect, as you call it, on the parents of the soldiers who happen to suffer because of the lack of

clothing, and on the friends of the soldiers, and that causes dissensions and dissatisfaction about the conduct of the War in every community in the United States, and further than that, it gives the anti-war newspapers a chance to publish all of this stuff by way of criticism, and if they do it with a sinister motive, it has a very bad effect on the population.

Col. Wood. Mr. Tilson asked whether a cloth made according to specifications or 65 per cent wool and 35 per cent of reworked wool, or made of 75 per cent wool and 25 per cent cotton, is the warmer and the more serviceable. I do not think there is any appreciable difference in the serviceability. I think possibly the breaking strength of the 75 per cent wool and 25 per cent cotton would be a little higher: it would be a little stronger, as would be shown by the breaking-strength tests, than the 65 per cent wool and 35 per cent shoddy. But the 65-35 combination would be the warmer of the two, and there would be less dampness in the blanket or overcoat in wet weather.

The CHAIRMAN. As I understand you, from your experience as a manufacturer and your actual experience in the field, you think the articles supplied, so far as keeping the soldiers warm is concerned, are as good as are supplied to the soldiers of any country in the world?

Col. Wood. Yes, sir. The uniform—the coat and the breeches—has thus far been made of all wool, with the exception of some small experimental and emergency purchases, which were an infinitesimal part of the whole quantity. The charge that the uniforms are being regularly made otherwise than of all new wool is a mistake.

There is probably one other thing I ought to state in order to make the whole subject clear.

There has been a great deal of discussion by the manufacturers and the economy board and others about the shortage of wool, and opposed to that, other statements have been made by some persons that there is no shortage of wool.

Both are right, but because of the difference of the statements it probably needs a little clearing up of the situation.

We have in this country at the present time probably as much wool as we ordinarily have. But there are two very important qualifications. Of the approximately 280,000,000 pounds grown in America in a year, which is about one-third of what we are now using, only about 35 per cent of that is of the grades such as are necessary for military clothing, and the rest of it is much finer fibered wool, and while it could be used it would be much more costly and not make so sturdy a cloth.

We rely for the rest of our wool upon importations from Australia, New Zealand, South America, and South Africa. Australia, New Zealand, and South Africa are under the control of Great Britain entirely, and owing to the shortage of ships it has been almost impossible to bring any from those colonies to this country for nearly a year. A certain amount has been brought from South America, but Great Britain's anxiety, both for herself and her allies, to create a reserve supply against a still more serious shortage of shipping, and competition in South America for the wool of the only open or free market, has made it impossible for us to accumulate supplies for the future. The whole question is involved with the problem of shipping.

There is a lot of wool in Australia and New Zealand, but most of that is also of the fine sort. Great Britain has taken almost all of the coarser wools for military purposes. The necessity for conservation at the present moment is because of the very great difficulty, if not impossibility, of bringing wools in any large quantity to this country, and while we have enough to probably see us through for this year, if the amount brought into the country continues to be as little as during the last nine months, we will have a famine in wool in 1919, while with the shortage of shipping increased by reason of destruction or by reason of diversion of still more vessels to carrying supplies to our troops in Europe, the wool situation will become acute even sooner.

That is the reason for anticipating and conserving the wool now while we have it, rather than waiting until the supply is exhausted. It is not a question of whether we want to use the cloth in the proportion of 65 to 35, but it is whether, by adopting that at the beginning of the war we can continue using that for a considerable period of time, or whether we should go on using 100 per cent in all of these articles for 1917, and then probably have to use a much greater proportion than 35 per cent of reworked wool. That is why this step was taken.

Gen. SHARPE. It was those suggestion presented by Col. Wood that induced me to approve of the use of the reworked wool in the garments, in order to conserve the wool supply and to prevent a very great increase in the price of the garments, and for that reason we have always kept away from using higher grades of wool, because we have felt that we could get just as serviceable and just as warm a garment without paying an extravagant price for it.

There is only one other question that I think the committee would like to hear from Col. Wood about, and that is because the matter has come up in the Senate committee as to whether in his opinion the weight of the O. D. melton 16-ounce cloth for the coat and trousers is sufficient; whether it is heavy enough cloth to be used. That matter has come up, and was very considerably discussed in the hearings before the Senate committee, and it may be possible when there is a conference between the two Houses the matter may come up again there.

The CHAIRMAN. Several members of the committee would like to ask Col. Wood some questions first.

Mr. SHALLENBERGER. I want to ask Gen. Sharpe a question or two. We have had at various times a number of statements as to the cost of the maintenance, the pay, and equipment and clothing of a soldier—the average cost of the private soldier. Can you put in the hearings a statement as to the average cost of a soldier, both in this country and in France?

Gen. SHARPE. The clothing?

Mr. SHALLENBERGER. The whole cost—for clothing, transportation, and every other cost as a soldier, both in this country and in France.

Capt. DALY. Exclusive of arms?

Mr. SHALLENBERGER. His entire equipment: everything you furnish him.

Gen. SHARPE. Yes, sir.

Articles.	Unit cost.	Require- ment at home.	Cost.	Require- ment abroad.	Cost.	Differ- ence in cost.
CLOTHING.						
Belts, waist.....	\$0.25	2.25	\$0.56	4.5	\$1.13	\$0.57
Blankets.....	6.00	5	30.00	9.4	56.40	26.40
Boots, rubber, pairs.....	4.43	(¹)	.....	4.2	18.60	18.60
Breeches, wool.....	4.35	4.5	19.58	10.36	45.07	25.49
Caps, winter.....	1.08	(¹)	.....	3.8	4.10	4.10
Chevrons, wool.....	.40	.74	.30	5.3	2.12	1.82
Coats, denim.....	1.25	2	2.50	6.1	7.63	5.13
Coats, wool.....	7.60	3.25	24.70	8.36	63.23	38.53
Cords, hat.....	.07	1.5	.11	3	.21	.10
Drawers, pairs.....	1.50	12	18.00	19.20	28.94	10.94
Gauntlets, winter, pairs.....	3.00	(¹)	.....	2.55	7.65	7.65
Gloves, yellow, horse hide, pairs.....	1.26	.08	.10	.67	.84	.74
Gloves, riding, pairs.....	2.10	.74	1.55	4	8.40	6.85
Gloves, woolen, pairs.....	.64	2.1	1.34	5.6	3.58	2.24
Hats, service.....	1.65	2	3.30	4.20	7.08	3.78
Jerkins.....	10.00	.....	.....	2.15	21.50	21.50
Laces, leggin, pairs.....	.02	2	.04	2	.04	.....
Laces, shoe, pairs.....	.02	2	.04	2	.04	.....
Leggins, canvas, pairs.....	1.05	3.25	3.41	7.94	8.34	4.93
Leggins, canvas, mounted, pairs.....	2.15	.6	1.29	.7	1.51	.22
Moccasins, pairs.....	1.00	.....	.....	12	12.00	12.00
Overalls, denim.....	1.25	3	3.75	7.75	9.60	5.94
Overcoats.....	14.92	2	29.84	4	62.66	32.82
Oveshoes, arctic, pairs.....	2.185	(¹)	.....	2.8	6.12	6.12
Shirts, flannel.....	3.64	4.5	16.38	8.28	30.14	13.76
Shoes, pairs.....	4.65	6	27.90	12.4	57.66	29.76
Slickers.....	4.10	2	8.20	4.2	17.22	9.02
Stockings, pairs.....	.45	15	6.85	20.60	13.36	6.61
Tags, identification.....	.01	3	.03	4	.04	.01
Toques.....	.84	.....	.....	3	2.52	2.52
Undershirts.....	1.50	5	7.50	18.23	27.34	19.84
EQUIPAGE.						
Bags, barrack.....	.95	.....	.....	1	.95	.95
Pins, tent shelter.....	.007	15	.11	15	.11	.....
Poles, tent, shelter.....	.25	2	.50	2.38	.60	.10
Tents, shelter half.....	2.95	2	5.90	2.88	8.50	2.60
			213.68	.....	535.32	321.64

¹ These articles not for general issue in the United States.

Mr. SHALLENBERGER. There have been a great many statements as to the cost of the maintenance of our Army in France, as compared with the maintenance of other armies in Europe, and I would like to know what that comparison shows. I have had the statement made to me that it costs about 14 times as much to maintain an American soldier in France as it requires to maintain a French or a German soldier over there, and in order to find out just what that comparison shows and to account for the expense of our Army I would like to have you put in the record what it costs us. When you estimate the pay for the private soldier you take the average pay for about a thousand men?

Gen. SHARPE. Yes, sir. The great difference will come in pay, particularly in the case of the French Army.

Mr. SHALLENBERGER. You have the transportation?

Gen. SHARPE. Yes.

Mr. SHALLENBERGER. And the clothing?

Gen. SHARPE. I do not know what the cloth for their clothing is.

Mr. SHALLENBERGER. I do not mean for you to make an absolute comparison, but to tell what the cost is to us.

Capt. DALY. It is costing the Government for the soldier, for all purposes, including the whole Military Establishment, nearly \$6,000 a year per man.

Mr. SHALLENBERGER. It is costing much more in France?

Capt. DALY. That is including the cost in France.

Mr. SHALLENBERGER. But can you not give us an estimate of what it costs for the soldiers you have to maintain across the sea?

Capt. DALY. Yes.

Mr. SHALLENBERGER. I have heard a great many statements as to the amount of tentage which is required per man per year—to maintain a man and move him to France. Can you give us an estimate or a statement as to about what tentage will be required per man, so that if we maintain a million troops we will have some idea as to what number of tents we will have to maintain to support those million troops?

Capt. DALY. Yes, sir.

Mr. SHALLENBERGER. Then, in a general way, you have made, no doubt, a very careful study of the care which other nations give to their soldiers. Can you state to the committee whether or not it is a fact that we clothe our soldiers as well or better than the soldiers of any other nation now fighting in Europe are clothed? Is it not your opinion that we do?

Gen. SHARPE. I think we do, but I would like to have Col. Wood answer the question I suggested to the chairman. I think that will answer it. I think we clothe them as well. We do not give our men as heavy underclothing as the men get in England, because our people do not wear it. Up until last year we only used woolen undershirts, and never used woolen drawers at all. We used cotton flannel drawers, because a great many people in our country do not wear woolen underclothes. They all do in England.

Mr. SHALLENBERGER. Can you give us a comparison in the matter of shoes?

Gen. SHARPE. Our shoe is better than the shoes of any of the rest of them. It is a combination of the English, French, Belgian, and Italian shoe, taking the best points in the way of manufacture from all of them.

Mr. SHALLENBERGER. Do you not think the ration we give our soldier is superior to the ration given to the French troops?

Gen. SHARPE. It is superior to the French ration, but the English have recently increased their ration, and it is as good as ours.

Mr. SHALLENBERGER. We pay our soldiers more?

Gen. SHARPE. Much more. The only army which pays its soldiers anything like the amount that our men get is the Canadian Army, and the pay given them was the cause of demoralizing the markets in that part of France where they went, because they were getting \$30 a month and they were willing to pay what they thought was a reasonable price, whereas their action really had a very serious effect upon the market values.

The CHAIRMAN. The Canadian soldiers are paid \$30 a month—the private soldiers?

Gen. SHARPE. Yes, sir.

The CHAIRMAN. They do not pay any more than we do?

Gen. SHARPE. Not as much. We pay our men 20 per cent additional for foreign service.

Mr. SHALLENBERGER. Capt. Daly gave us the figure of \$547 as the per capita cost. What does that include?

Capt. DALY. That includes the whole items of clothing and equipage.

Mr. SHALLENBERGER. Any subsistence?

Capt. DALY. The subsistence is \$152 per man.

Mr. SHALLENBERGER. That amount of \$547 includes clothing, equipage, and everything except his arms?

Capt. DALY. No; that does not include subsistence. It does not include stationery and kitchen utensils. It is just the clothing and the tentage and the equipment issued to a man.

Mr. SHALLENBERGER. In making your statement in reference to the total expense of the soldier, will you make it in separate items, so that it can be readily analyzed?

Capt. DALY. In the notes that follow each item we will have that per capita.

Mr. HARRISON. There are so many different reports that come from the camps, some through Congressmen and some through the various officers and others, that I would like to know if there is any system of inspection by your department to see whether your officers there in the camps are making the necessary requisition on you for the proper supplies and the extent to which the men are actually supplied.

I have seen statements made in the press that the Secretary of War is thoroughly satisfied with the conditions in the camps, but we get reports, such as the letter I put in the record, and I have been getting complaints that things are not what they ought to be. I was wondering whether there is a system in your department of inspection, of seeing whether the proper supplies are called for by your officers in the camp. In other words, whether the officers of the Quartermaster Department in the camps are making proper requisitions, and whether, when they do make the requisitions, the supplies get to the soldiers.

Gen. SHARPE. The requisitions all come to our office.

Mr. HARRISON. Suppose there is an officer in one of the camps who does not make the requisition which he ought to make?

Gen. SHARPE. We could not control that. If he reports that he has on hand more than he actually has—his requisition calls for the difference between what he requires and what he has on hand.

Mr. HARRISON. Suppose he does not make proper requisitions?

Gen. SHARPE. That is for his commanding officer to control.

Mr. HARRISON. Would you have no way of knowing whether he was properly discharging his duties?

Gen. SHARPE. We have no way of knowing that. His commanding officer would have control of that. The Inspector General goes out from time to time and inspects all of those matters at the camps.

Mr. HARRISON. Then there is a system of inspection?

Gen. SHARPE. Yes.

Capt. DALY. The camp commander would have jurisdiction also. It would be his duty to see that the quartermaster makes the necessary requisitions.

Gen. SHARPE. He has an inspector at the camp.

Mr. GREENE. We will very likely be met on the floor of the House by some repetition of the popular misunderstanding of the word shoddy and its application to our particular situation now in the manufacture of uniforms, etc. Will you, Col. Wood, be kind enough to frame some kind of a concise statement and put it in the record that will show what you have so interestingly explained to us in detail, in such concise form that we may have it to quote, making plain the distinction between the so-called reworked wool that is worked into the fabric and this substitute which is the cheapest the trade knows of, and which is plastered in on the garment?

Col. WOOD. Do you want me to make that with some care?

Mr. GREENE. Yes; so that we may have that to quote and to show that what we are talking about when we refer to shoddy is not the plaster stuff but real fabric.

The CHAIRMAN. In other words, the shoddy we are talking about is the technical term.

Mr. QUIN. And that the cloth they put into the overcoats and blankets which they talked about so much in the hearings before the Senate committee is as good as anything they can use.

Col. WOOD. A great deal of the discussion occurred in the Senate committee hearing as to the sufficiency of the weight of the uniform cloth which is now 16 ounces to the yard, and it has been referred to by some of the members of the committee as being entirely inadequate.

I make the same statement now that I did before that committee, that until some American experience in European service determines the necessity for greater weight, I think it would be a very serious mistake to increase the weight, and for this reason: The troops in the expeditionary force are to wear this uniform the year around. The 16-ounce weight is heavier than the average weight of civilian winter clothing in this country, which is 14 ounces. If they are to wear a still heavier weight, the 20 or 21 ounce weight, such as is worn by European troops, I think they will suffer very greatly during the larger part of the year when the temperature is not severe.

With the 16-ounce uniform it is possible to supplement it in extremely cold weather by using sweaters, or jerkins, or an extra suit of underwear. But in the warmer weather, during most of the year, there is no way in which the heavy uniform can be lightened.

The reason for the difference in weight between our uniform and that of the European soldiers is a national characteristic. In Europe the civilian clothes are still made in the heavy weights that were common to this country several generations ago. The winter clothing is 20 or 22 ounces and the summer clothing is 14 ounces. Because of the public demand in the United States for lighter clothing, just the same sort of a demand that made people cease to wear red flannel shirts, there has been a progressive lightening of the weight until the common weight is about 14 ounces. That represents American experience.

It is impossible for us to say that our troops may not require something warmer in the trench warfare in the wintertime, but those of us who are familiar with the Northern climates here are inclined to believe the necessity for heavier clothing is no greater there than here.

If it is, it would be much simpler to supplement that by wearing extra underwear, or a sweater, than it would be to lighten it in the warmer parts of the year.

Mr. SHALLENBERGER. You spoke about the amount of wool being used in the knitting of sweaters. I understood Gen. Sharpe to say that it was anticipated that every private soldier would be furnished with one of the leather jackets, or a jerkin, and that if the soldier wears one of those leather jackets he would have no immediate use for a sweater.

Col. WOOD. No; except in very severe weather.

Mr. SHALLENBERGER. So it might possibly be a matter of economy of wool to discourage the sending of sweaters over there at the present time.

Col. WOOD. I think so. None of them can reach there in time for this winter, and so far as next winter is concerned, the Army will probably be entirely supplied with these jerkins. Meanwhile, the continued using of enormous quantities of yarn is making a serious draft on the wool supply of the country.

The heavier cloth used in the uniforms abroad is made up without lining, while our uniforms are lined.

Mr. SHALLENBERGER. Do you anticipate having the leather jerkins over there for this winter?

Col. HIRSCH. They are already there. We have already delivered over 500,000 of them, and we only need less than 200,000.

Mr. SHALLENBERGER. So if we had a sweater for every man, he would have a leather jerkin and a sweater?

Col. HIRSCH. I imagine every man over there has a sweater, anyway.

Mr. SHALLENBERGER. He would really have no particular use for a sweater, with one of the leather jerkins?

Col. HIRSCH. Personally, from my own experience, I think every soldier wants a sweater and should have it. If I do not wear a sweater when I am out, I will wear it when I come back. I think every soldier would like a sweater.

Mr. SHALLENBERGER. As well as the leather jerkin.

Col. HIRSCH. He would wear them at different times. When he comes back to his tent he will put on his sweater—he likes to wear it in place of a coat.

Mr. HULL. I think an answer to this question would be well to have in the record. It is not possible that these sweaters are ever sold to the soldiers, is it?

Gen. SHARPE. That the sweaters are sold?

Mr. HULL. Yes.

Gen. SHARPE. I do not know.

Mr. HULL. As an Army man, you would know if they are sold by the Red Cross, or anybody in authority.

Gen. SHARPE. I should say decidedly not.

Mr. HULL. I wanted an answer to that question in the record, because the statement has been made, and I know that is not possible.

Mr. DAVIDSON. In connection with Col. Wood's statement about the use of the uniform in France in the warm weather, is there any disposition to supply to our soldiers khaki or light uniforms?

Gen. SHARPE. No; Gen. Pershing says they do not want the khaki uniforms over there. The nights are sufficiently cool to require the wool, and he has just asked for a shipment of cotton underwear, anticipating that he is going to change to that in the springtime. Our custom with the Army is in the summer time to leave off the coat and just have the ordinary olive-drab shirt.

Mr. QUIN. What is the temperature in Flanders compared to our temperature here?

Gen. SHARPE. One of the French officers says it is about the same kind of weather we have been having here recently.

Mr. QUIN. How is it in the summer time?

Gen. SHARPE. It is cooler than we have it, and the nights are cool. The details of the estimate are as follows:

Divisions arranged in order according to new cases pneumonia for week ending Jan. 4, 1918.

Divisions.	New cases of pneumonia.	Number of wool coats reported short Dec. 26, 1917.	Numerical order arranged according to shortage of coats.	Divisions.	New cases of pneumonia.	Number of wool coats reported short Dec. 26, 1917.	Numerical order arranged according to shortage of coats.
Ninetieth.....	72	6,632	5	Thirty-fifth.....	9	.....	25
Eighty-seventh.....	66	5,868	6	Eighty-second.....	9	7,900	4
Eightieth.....	59	2,790	15	Thirty-eighth.....	7	5,100	8
Fortieth.....	38	13,809	1	Eighty-ninth.....	7	9,600	2
Thirty-first.....	37	1,141	21	Seventy-ninth.....	7	8,912	3
Thirty-ninth.....	35	3,094	14	Thirty-third.....	6	.....	24
Thirty-fourth.....	30	2,182	17	Eighty-sixth.....	6	3,821	11
Thirtieth.....	25	2,395	16	Ninety-first.....	6	(1)	.....
Thirty-sixth.....	23	3,726	12	Thirty-seventh.....	5	(1)	.....
Eighty-fourth.....	21	1,086	22	Eighty-third.....	5	1,150	20
Eighty-first.....	17	(1)	.....	Twenty-ninth.....	3	1,200	19
Thirty-second.....	12	5,500	7	Eighty-fifth.....	3	4,530	9
Seventy-seventh....	12	.....	27	Seventy-sixth.....	2	.....	26
Eighty-eighth.....	10	300	23	Seventy-eighth.....	2	1,440	18
Twenty-seventh....	10	3,367	13	Twenty-eighth.....	1	4,000	10

¹ No report.

JANUARY 22, 1918.

The cloth made for the woolen uniforms for soldiers is made of pure new wool.

In the emergency of the Mexican border service some contracts were made for uniform cloth composed of a mixture of 75 per cent new wool and 25 per cent new cotton.

In April, 1917, the woolen committee of the Council of National Defense advised against the use of cotton in the uniform cloth, and recommended that this fabric be made entirely of new wool. This recommendation was adopted and contracts were subsequently made for the all-wool goods.

The overcoat cloth and the soldier's blankets had also been made with an admixture of cotton. The committee of the Council of National Defense disapproved the use of cotton in these fabrics and recommended that 35 per cent of a good quality of reworked wool be substituted for the cotton with a view to greater warmth and the avoidance of the disadvantages inherent in the cotton mixture when subjected to wet or dampness. These changes were also adopted, and it is confidently believed that the overcoats and blankets thus made are of excellent durability, fully as warm as those made entirely of new wool, and much warmer and more comfortable than those made with the admixture of cotton.

By using the proportion of reworked wool in the overcoat cloth and blankets, it will be possible to continue this proportion in these cloths and make the uniform cloth of all new wool for a much longer period than would be possible

had all of these goods been made wholly of new wool from the beginning of the war, for while there is still a good supply of wool in the United States, the amount imported in 1917 was much less than in 1916, and owing to the limitations of available shipping there is serious doubt whether enough of suitable sorts of wool will be brought here during 1918 to supply the deficiency in domestic production.

It is understood that Great Britain has found it necessary to employ reworked wool even in uniform cloths of British and colonial troops, although the British Empire produces about 64 per cent of all the wools of the world suitable for clothing that are exported from the countries of origin.

If available shipping continues to be required in increasing quantities for transport and shipping of supplies from the United States to Europe, it seems quite probable that the very good quality of uniform cloth now supplied to the Army may later have to be replaced with goods composed in part of reworked wool; and the necessity for that change in the uniform has undoubtedly been considerably deferred by the earlier use of reworked wool in the overcoats and blankets, where it can be more advantageously employed.

Because of the difficulty of having completed in time sufficient quantities of goods in process of manufacture of the kinds already described, to provide for the large number of troops to be assembled, certain emergency purchases were made, a small part of which did not conform to the changes mentioned. But these small quantities were additional to what would otherwise have been received, and though less desirable in point of durability were of great value in providing more warm clothing and blankets than would have been possible had none of these additional goods been obtained.

It should further be mentioned that a large part of the reworked wool employed is derived from the waste parts of the new Government cloths left from the cutting of uniforms and overcoats. Samples of the waste cloth and of the reworked wool derived from it are submitted with this statement, together with typical samples of the overcoating cloth and blankets containing 35 per cent of reworked wool.

JNO. BLOOD,
Colonel, Quartermaster Corps.

A is a sample of the cloth clips.

B is a sample of the cloth clips after first process of reworking.

C is a sample of the cloth clips after second process of reworking.

D is a sample of overcoat cloth made of 65 per cent new wool and 35 per cent of reworked wool like sample.

DECEMBER 24, 1917.

Changes made in the specifications for woolen cloth and reduction in cost per yard as the result of such changes.

1. The Council of National Defense on June 27 last transmitted revised specifications for 30-ounce melton, as recommended by the woolen committee. Mr. Eisenman also advised this office at the same time that large quantities of this fabric were then being made. These specifications call for mixture of this fabric to consist of 65 per cent wool and 35 per cent wool substitutes. The material prior to the proposed change referred to consisted of 75 per cent three-eighths blood wool and 25 per cent cotton.

2. Pending action upon the adoption of these specifications, Mr. Charles Eisenman, of the committee on supplies, Council of National Defense, on September 6, 1917, requested the privilege of using such wools and wool substitutes in woolen fabrics, including melton, as in the judgment of the committee would be deemed wise and necessary in the conservation of such grade of wool upon which there might be a shortage and for the expedition of fabrics necessary for the equipment of the Army.

3. In reply to this communication, the Quartermaster General, on September 7, 1917, approved this recommendation, with the understanding that the textile and color tests were not to be affected. The cost of the material purchased under these conditions was \$3.50 per yard, the same as heretofore, due to the increased price in wool.

4. On October 20, 1917, Maj. W. B. Gracie, Quartermaster Corps, wool purchasing quartermaster at Boston, Mass., forwarded a letter from Mr. J. F. Brown, chairman wool purchasing committee, to the committee on supplies, stating that in view of the insufficiency of the supply of one-fourth blood or similar wools that it would not be possible to make with profit the 30-ounce melton at

\$3.50 per yard on a basis of 65 per cent wool and 35 per cent cotton, but that if the composition could be made 50 per cent wool and 50 per cent cotton sufficient wool would be available to permit the making of the 30-ounce melton on the latter percentage at \$3.40 per yard. On the 23d of October a memorandum was submitted to the Quartermaster General to the effect that the Bureau of Standards had been communicated with by telephone, resulting in the recommendation that the greatest amount of cotton should be 35 per cent and wool 65 per cent, and strongly recommended against the use of 50 per cent cotton. In consequence the Quartermaster General, on October 25 last, informed the Council of National Defense (attention of Mr. Eisenman) as indicated above, to which reply was made on the 30th of October that contracts for 30-ounce melton placed by the committee on supplies contained no cotton, but that manufactures were being made on 50 per cent virgin wool and 50 per cent reworked wool.

COATS, SERVICE, WOOLEN.

Contractor.	Quantity.	Price.	Date of contract.	To be delivered—															
				1917						1918									
				May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.		
C. Canyon Co., New York and Brooklyn.	45,000	\$1.59			25,000	20,000													
S. Eisner Co., Red Bank, N. J.	45,000	1.59			5,000	20,000													
J. N. Susskind & Co., Philadelphia.	60,000	1.5475			12,500	12,500		12,500	10,000										
Siegel Bros. & Goodman, New York.	50,000	1.52			3,000	41,000													
Wm. C. Rowland, Philadelphia, Pa.	5,000	1.50			2,000	3,000													
Mark Cowan Co., New York.	25,000	1.475			10,000	5,000													
Jacob Reed's Sons, Philadelphia.	10,000	1.59	Apr. 5, 1917		10,000														
S. Eisner Co., Red Bank, N. J.	100,000	1.749	Apr. 10, 1917									100,000							
J. N. Susskind & Co., Philadelphia.	220,000	1.749	do.			44,000	44,000	44,000	44,000	44,000									
Sonneborn Co., Baltimore, Md.	200,000	1.749	Apr. 12, 1917		40,000	40,000	40,000	40,000											
S. Eisner Co., Red Bank, N. J.	35,000	8.70	Apr. 18, 1917			35,000													
Do.	10,000	8.70	do.		10,000														
Do.	5,000	8.70	do.		5,000														
Heidelberg, Wolfe & Co., New York.	100,000	1.749	(1)		10,000	20,000	20,000	20,000	10,000										
C. Canyon Co., New York and Brooklyn.	100,000	1.749	(1)									100,000							
Siegel Bros. & Goodman, New York.	250,000	1.59	(1)																
Do.	100,000	1.749	(1)		25,000	25,000	75,000	75,000	75,000	50,000									
Cohen Goldman, New York.	100,000	1.749	(1)		20,000	20,000	20,000	20,000											
Mark Cowan, New York.	100,000	1.55	(1)							100,000									
J. C. Bernheim, New York & Brooklyn.	45,000	1.749	(1)		15,000	20,000	10,000	10,000											
Kling Bros. & Co., Chicago.	50,000	1.749	June 7, 1917				10,000	10,000	10,000	10,000	10,000								
The Guggenheim Co.	85,000	1.749	do.				10,000	15,000	20,000	25,000	25,000								
J. C. Bernheim, New York & Brooklyn.	100,000	1.749	June 22, 1917			7,000	17,500	14,000	14,000	17,500	10,000	14,000	2,000						
J. N. Susskind & Co., Philadelphia.	100,000	1.749	June 28, 1917										50,000	80,000					
Jacob Reed's Sons, Philadelphia.	100,000	1.749	do.		16,000	20,000	16,000	16,000	20,000	12,000									
Frankel Bros., New York.	100,000	1.749	July 11, 1917				20,000	20,000	20,000	20,000	20,000	20,000							
Jacob Reed's Sons, Philadelphia.	100,000	1.749	July 20, 1917										30,000	35,000	35,000				
H. Sonnebron & Co., Baltimore.	350,000	1.749	Sept. 5, 1917										100,000						
Seeman & Grossman, New York.	80,000	1.749	(6)									50,000	100,000						
Lithauer & Liepeelg, New York.	70,000	1.749	(6)									20,000	30,000						
New York Uniform Manufacturing Corporation, New York.	150,000	1.749	(6)									20,000	20,000	10,000					
S. Golde & Sons, New York.	132,500	1.749	(6)									30,000	45,000	25,000					
												28,000	40,000	24,800					

OVERCOATS, OLIVE DRAB.

Marx & Haas Clothing Co. St. Louis.	1.649	50,000	(7)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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New York.

Chicago.

IN

No. 208.

No. 847 (Balt. sub.)

New York X.

ST. LOUIS, Mo.

No. 1849

No. 1008.
P. O. No. 9374

11 No. 880. P.

2. No supplier

• Oct 30, supplemental agreement—changes—\$0.09 lots.

¹⁴ Supplemental agreement Sept. 5, 1917, 40,000 to be delivered.

15 Feb 50 105 hrs.

புதுச்சேரி

106 600 ornaments to be made about length: see environment

over 100,000,000

OVERCOATS, OLIVE DRAB—Continued.

Contractor.	Quantity.	Price.	Date of contract.	To be delivered—														
				1917														
				May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	
American Uniform Co., New York	50,000	\$1.9470	(1)					50,000										
Heidelberg, Wolfe Co., New York	150,000	1.9470	(1)					150,000										
C. Kenyon Co., Brooklyn, N. Y.	15,000	1.9470	Apr. 12, 1917	5,000	10,000													
Cohen Goldmann Co., New York	100,000	1.9470	(1)									100,000						
Julius C. Bernheim, New York	100,000	1.9470	(1)		15,000	20,000	20,000	20,000	20,000	5,000								
J. N. Susskind & Co., Philadelphia, Pa.	50,000	1.9470	June 7, 1917			15,000	15,000	15,000	15,000	4,500								
Jacob Reed's Sons, Philadelphia, Pa.	50,000	1.9470	June 8, 1917		7,500	10,000	10,000	10,000	10,000	2,500								
Cohen Goldman & Co., New York	100,000	1.9470	June 12, 1917			10,000	20,000	20,000	20,000	20,000	10,000							
J. J. Preis & Co., New York	100,000	1.9470	do. 1		8,000	20,000	20,000	20,000	20,000	12,000								
Julius C. Bernheim, New York	100,000	1.9470	June 22, 1917			7,000	17,500	14,000	14,000	17,500	14,000	14,000	2,000					
The Block Co., Cleveland, Ohio	50,000	1.9470	do. 2			2,500	6,000	12,500	12,500	16,500								
J. N. Susskind & Co., Philadelphia, Pa.	100,000	1.9470	June 28, 1917							20,000	20,000	20,000	20,000					
S. Eisner Co., Red Bank, N. J.	24,000	1.9470	do. 3			5,666	5,666	5,666	5,666	5,666	5,666	5,666						
Cohen Endel & Co., New York	200,000	1.9470	June 29, 1917			30,000	50,000	40,000	40,000	40,000								
Frankel Bros., New York (No. 51, New York)	250,000	1.9470	July 11, 1917				50,000	50,000	50,000	50,000	50,000							
Browning King & Co., New York (No. 181, New York)	50,000	1.9470	July 7, 1917				8,000	8,000	10,000	8,000	8,000	10,000						
Abraham Beaman, New York (New York)	60,000	1.8800					10,000	35,000	15,000									
Pursch & Levin, New York (No. 412, New York)	140,000	1.7700	Aug. 10, 1917							30,000	30,000	40,000	40,000					
Sidney Aloe, Philadelphia, Pa. (No. 630)	300,000	2.0700	Aug. 25, 1917															
Pursch & Levin, New York (short)	25,000	1.7700	Apr. 9, 1917					15,000	10,000									
C. Kenyon, Brooklyn, N. Y. (short)	25,000	1.8670	Apr. 12, 1917					20,000	15,000									
Henry Sonnenbom & Co., Baltimore, Md. (No. 847, Baltimore, sub-short)	100,000	1.9500	Aug. 5, 1917						100,000									
Do.	300,000	2.0700	do.							60,000	60,000	60,000	60,000	60,000				
Sigmund Eisner Co., Red Bank, N. J. (No. 923)	150,000	2.0600	Aug. 12, 1917															
Lewis Fleischer & Co., Philadelphia, Pa. (No. 942, S. L. C. 1.99 Dec. 7, 1917)	75,000	2.0800	Aug. 14, 1917						10,500	15,000	20,000	20,000	20,000					
Joseph Skalby Co., New York	100,000	2.0800							22,500	35,000	35,000	35,000	35,000	7,500				

OVERCOATS, OLIVE DRAB—Continued.

Contractor.	Quantity.	Price.	Date of contract.	To be delivered—											
				1917						1918					
				May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.
Hart, Behauner & Marx, Chicago (No. 103/2404, S. L., Chicago).....	40,000	\$2.75	Nov. 3, 1917							15,000	25,000				
Paol Bros. & Crane, Philadelphia (No. 1705, S. L.).....	12,000	2.03	do.							4,000	8,000				
Trimount Coat Co., Boston (No. 959/3513, S. L., Boston).....	10,000	2.07	Nov. 6, 1917							4,000	6,000				
Milton Simpson, New York and Brooklyn.....	28,000	1.89	Oct. 30, 1917							8,000	10,000	20,000			
S. A. & H. Myers, Boston (No. 940/3514, Boston).....	10,000	2.07	Nov. 6, 1917							5,000	5,000				
Prince Wolf Co., Cleveland (No. 229C, S. L.).....	1,000	2.84	Nov. 23, 1917								1,000				
Kelly Cloak & Suit Co., Cleveland (No. 237C, S. L.).....	1,000	3.48	do.								1,000				
Kelly-Kohn Co., Cleveland (No. 225C, S. L.).....	1,000	3.20	do.								1,000				
Midland Tailors, Cleveland (No. 224C, S. L.).....	1,000	3.05	do.								1,000				
John Ansfield, Cleveland, Ohio (No. 225C, S. L.).....	1,000	2.45	do.								1,000				
S. Korach & Co., Cleveland, Ohio (No. 225C, S. L.).....	1,000	2.645	do.								1,000				
M. T. Silver Co., Cleveland, Ohio (No. 225C, S. L.).....	1,000	2.27	do.								1,000				
Alscheuler, Freyer & Co., Cleveland, Ohio (No. 225C, S. L.).....	1,000	3.12	do.								1,000				
Morganthau Bros., Cleveland, Ohio (No. 1984, S. L.).....	1,000	3.38	do.								1,000				
Klarheimer, Stein Co., Cleveland, Ohio (No. 231C, S. L.).....	1,000	3.50	do.								1,000				
H. Black Co., Cleveland, Ohio (No. 220C, S. L.).....	1,000	2.32	do.								1,000				
Printz-Biederman, Cleveland, Ohio (No. 223C, S. L.).....	1,000	2.25	do.								1,000				
Booth Wooden Mills, Chicago, Ill. (No. 222C).....	1,000	2.89	do.								1,000				
Unity Tailoring Co., Chicago, Ill. (No. 220C).....	1,000	3.19	do.								1,000				

[illegible]

BREECHES, WOOL, MOUNTED.

[illegible]

BRRECHES, WOOL, FOOT, NEW PATTERN.

[illegible]

* See supplemental agreement to be made N. P., price \$0.924.

San Francisco, S. L.

New York.

BRECHES, WOOL, FOOT, NEW PATTERN—Continued.

Contractor.	Quantity.	Price.	Date of contract.	To be delivered—									
				1917					1918				
				May.	June.	July.	August.	September.	October.	November.	December.	January.	February.
Mark Cowan & Co., New York.....	10,000	\$0 72	Apr. 7, 1917 ¹	2,000	4,000	4,000							
Pursch & Levin, New York.....	125,000	737	May 28, 1917 ¹						40,000	40,000	45,000		
Kling Bros & Co., Chicago.....	25,000	737	June 7, 1917 ²				5,000	5,000	5,000	5,000	5,000		
J. N. Snellenburg, Philadelphia, Pa.....	70,000	737	June 7, 1917				20,000	20,000	15,000				
D. Degenstein & Co., Philadelphia, Pa.....	10,000	737	do		2,500	7,500							
Jacob Reed's Sons, Philadelphia, Pa.....	120,000	737	June 8, 1917	30,000	40,000	40,000	10,000						
Julius C. Bernheim, New York and Brooklyn.....	50,000	737	(1)		5,000	20,000	20,000	5,000					
Cohen Goldman & Co., New York.....	50,000	737	June 12, 1917 ¹			5,000	10,000	10,000	10,000	10,000	5,000		
Julius C. Bernheim, New York and Brooklyn.....	100,000	737	June 22, 1917 ¹			7,000	17,500	14,000	14,000	17,500	14,000	14,000	2,000
J. N. Suskind & Co., Philadelphia, Pa.....	300,000	737	June 28, 1917 ¹						60,000	60,000	60,000	60,000	60,000
Mark Cowan & Co., New York.....	1,000	72	June 22, 1917 ¹		1,000								
Pursch & Levin, New York.....	100,000	737	June 29, 1917 ¹					25,000	25,000	25,000			
Rosenwald & Well, Chicago.....	60,000	95	June 28, 1917 ²			15,000	12,000	15,000	15,000	8,000			
Mark Cowan & Co., New York.....	75,000	8085	June 29, 1917 ¹				15,000	15,000	15,000	15,000	15,000		
J. Capps & Sons, Chicago.....	20,000	737	July 17, 1917 ¹				2,000	4,000	4,000	5,000	5,000		
J. Reed's Sons, Philadelphia, Pa.....	125,000	737	July 20, 1917 ¹									38,000	43,000
Levy & Rosenthal, New York.....	40,000	92	Aug. 10, 1917 ¹				11,000	24,000	40,000	15,000			
Henry Brewster, New York.....	60,000	92	do				6,000	18,000	16,000				
H. F. Furstenberg, New York.....	60,000	92	do				6,000	20,000	20,000	15,000			
Levy & Schill, New York.....	60,000	92	do				10,000	20,000	20,000				
Platt, Fisher & Landis, New York.....	60,000	92	do				10,000	26,000	30,000	15,000			
Saloner & Heskowitz, New York.....	50,500	81	do				500						
David Epstein, New York.....	40,000	92	do				6,000	26,000	9,000				
Sidney A. Co., Philadelphia, Pa.....	250,000	95	Aug. 25, 1917 ¹					6,000	6,000	25,000	25,000	25,000	25,000
Wanamaker & Brown, Philadelphia.....	100,000	95	Aug. 27, 1917 ¹						20,000	20,000	20,000	20,000	20,000
The Hermac Co., Philadelphia.....	100,000	95	Aug. 30, 1917 ¹						40,000	40,000	20,000		
Progressive Uniform Co., New York.....	30,000	92	Aug. (1)				12,000	15,000					

¹ New York.
² Chicago.
³ See supplemental agreement.

¹ No. 136, Chicago.
² No. 208.
³ New pattern.

¹ No. 630.
² No. 631.
³ No. 632.

PURCHASE AND MAINTENANCE OF RESERVE SUPPLY OF WOOL FOR THE QUARTERMASTER CORPS.

For the purpose of obtaining and maintaining a supply of wool available at all times while the war shall last so that manufacturers contracting for supplies for the Quartermaster Corps may be protected in their bids in the event that they do not own wool themselves, the following committee donominated "The Committee on Wool Supply of the Council of National Defense" is appointed: Mr. Jacob F. Brown, chairman, Mr. Stephen O. Metcalf, Mr. Frederick S. Clark, with Mr. Robert H. Stevenson, jr., as secretary.

It is the intention of the War Department to maintain a reserve supply of wool approximating, but not exceeding, \$25,000,000, and to endeavor to keep this quantity as a working stock ahead of orders. Based on this, the committee will proceed to purchase \$10,000,000 to \$12,000,000 worth of wool, a portion of which will be suitable for the 8½-ounce flannel, 16-ounce suiting, 30-ounce overcoating and blankets, with possibly some finer wool adapted for underwear.

POWERS OF THE COMMITTEE ON WOOL SUPPLY.

The Committee on Wool Supply, which is a subcommittee of the Council of National Defense, is authorized to carefully investigate the different offerings of wool that are made and to make such selections as they feel to be the most advantageous for the Government to own and then to recommend these selections for approval to the quartermaster selected by the Quartermaster General as his direct representative. On the quartermaster's approval of such purchases, instructions will be given to owners to bill up, attaching a weigh certificate duly sworn to by the weigher, storage receipts and list of insurance policies applying, or actual policies when requested. These papers, after being checked and certified to by the Committee on Wool Supply, will be submitted to the purchasing quartermaster for his attention and payment, if in his judgment such payment is warranted. The amount of wool to be carried in stock will be decided by the Wool Supply Committee.

PROCESS OF BUYING.

Samples, large enough to represent the different lots of wool, will be submitted to the Committee on Wool Supply, with the owner's price, this price being known only to the committee. After removing all identification marks from samples, the various valuation committees, selected by the Boston Wool Trade and the Committee on Wool Supply, will make a report in writing, describing the wool and putting their valuation thereon. After a comparison of the various goods delivered, with the owners' prices, those lots that are offered at a higher price than the valuation will be discarded. The lots offered at an equal or less price than the valuation put on by the valuation committee will be set aside for the examination of the Committee on Wool Supply, and from these lots such lots will be selected as are considered desirable, and the remaining lots will be rejected. The lots selected for purchase will then be examined in bulk by wool experts from the various valuation committees, and if their written report substantiates the fact that the wool is like the original sample, then purchase will be recommended to the purchasing quartermaster.

A complete card system will be installed which will show the record of each lot of wool submitted and also a record covering the offerings from each individual firm so that at any time in the future data will be available to show why certain lots were rejected or why certain lots were bought.

The terms of purchase of wool in the Boston market will be covered by the following agreement:

COMMITTEE ON WOOL SUPPLY OF
COUNCIL OF NATIONAL DEFENSE,
273 Sumner Street, Boston, Mass.

GENTLEMEN: We agree that on all wool submitted to your committee, the terms of sale shall be as follows:

Net cash within 10 days from delivery of bill, detailed weights, storage receipt, and memorandum of insurance policies applying, or actual policies applying, when requested. We will allow customary tare. Charge for top bags at a fair price. New bags at 60 cents each, No. 1 bags at 45 cents each, No. 2 bags at 35 cents each, short bags at 25 cents each. We will make no charge for stencilling as may be directed. We will make no charge for storage (or

insurance) for a period not exceeding four months, but after four months the charge for storage per month, or fraction thereof, shall be 15 cents per hundred pounds on scoured wool, 6 cents per hundred pounds on grease wool, this wool to be fully covered by insurance without cost to the Government. We will furnish a certificate of weights as weighed by a sworn weigher who is not in our employ, and if any palpable errors should develop, we agree to make same good. We agree to guarantee the Government against any loss arising from the failure of any individual firm or corporation (which has been approved by the committee constituted for that purpose) to fully carry out its agreement. The amount of our liability under this guaranty will be determined by the relation that our own sales to the Government bear to the total sales of the coinsurers, but we do not guarantee the solvency of any insurance company or against losses arising from riots, explosions, invasions by foreign enemies, civil commotions, or any military or usurped power whatever. We agree that any lot offered to the Committee on Wool Supply is to be under refusal until withdrawn by written notification to the committee, but no lot is to be withdrawn within two weeks from date of delivery of sample. We will offer to manufacturers, who either have or are anticipating contracts for manufacturing goods for the Government, every facility for examination of all wool or tops bought by the Government of us and will quote such prices as the agents for the Government may request.

(Date.)

(Signature.)

The terms of purchase in the secondary markets of Philadelphia, New York, Chicago, and St. Louis will be according to the following agreement:

COMMITTEE ON WOOL SUPPLY OF COUNSEL OF NATIONAL DEFENSE,
273 Summer Street, Boston, Mass.

GENTLEMEN: We agree that on all wool submitted to your committee that the terms of sale shall be as follows: Net cash within 10 days from delivery of bill, detailed weights, public warehouse receipt and memorandum of insurance policies applying, or actual policies applying, when requested. We will allow customary tare. Charge for top bags at a fair price, new bags at 60 cents each. No. 1 bags at 45½ cents each, No. 2 bags at 35 cents each, short bags at 25 cents each. We will make no charge for stenciling as may be directed. We will make no charge for storage or insurance for a period not exceeding four months, but after four months the charge for storage per month, or fraction thereof, shall be 15 cents per 100 pounds on scoured wool, 6 cents per 100 pounds on grease wool, the Government stock of wool to be kept fully insured without expense to the Government. We will furnish a certificate of weights as weighed by a sworn weigher who is not in our employ, and if any palpable errors should develop, we agree to make same good. We agree that any lot offered to the Committee on Wool Supply is to be under refusal until withdrawn by written notification to the committee, but no lot is to be withdrawn within two weeks from date of receipt of sample. We will offer to manufacturers, who either have or are anticipating contracts for manufacturing goods for the Government, every facility for examination of all wool or tops bought by the Government of us and will quote such prices as the agents for the Government may request.

(Signature.)

(Date.)

It will probably be found impracticable to attempt to buy wools in small country markets or small secondary markets, and this situation will be covered by circular to read substantially as follows:

DEAR SIR: Wools bought for the Government are for the use of manufacturers making goods for the Army. These manufacturers will wish to see the wools in bulk before making their selections and as the Government has no adequate storage facilities, it is important that wools purchased should be in markets easily accessible and where considerable quantities can be shown at any time. It is essential that when wool is paid for it should be held in public or guaranteed warehouses. If you can suggest a way in which you can meet these necessary conditions we will be pleased to consider your offerings. We inclose copies of notices and agreements sent to other markets.

Yours, very truly,

COMMITTEE ON WOOL SUPPLY,
Secretary.

(Date.)

These agreements in all cases will be signed by some person or persons authorized to sign for the firm, company, or corporation.

Before buying wool of any holder in the secondary markets it will be necessary that the seller file the agreements above quoted showing that he has accepted the terms of sale. These terms of sale will also cover the agreement by each seller to show all wools purchased of him to any manufacturer with Government orders and to quote such price as requested by the Committee on Wool Supply. This will obviate the necessity of establishing a showroom with a force of clerks to do this work, and the arrangement will doubtless be most satisfactory to manufacturers. The seller will also agree, as required in the circular, to attend to the shipping and billing when he receives orders from the purchasing quartermaster to ship the wool.

WOOL, ISSUE OF.

A list will be made of houses from whom wool has been bought, and these lists will be available for manufacturers who have taken Government orders. These manufacturers will have the privilege of examining any or all of the lots of wool and of learning the price at which they are available. They will also be informed that they are not obliged to buy these particular wools, but may buy wool elsewhere if, in their judgment, it is more adaptable or can be secured at lower figures. If a manufacturer wishes to avail himself of wool belonging to the Government, he will make requisition on the contracting quartermaster stating the number of the lot or lots and quantity he wishes. The contracting quartermaster will forward same to the wool-purchasing quartermaster in Boston, with copy of the contract. The Committee on Wool Supply will determine from the data thus submitted whether or not the amount of wool requisitioned for is proper, and on their approval of the requisition the wool-purchasing quartermaster will call upon the contractor for a sufficient bond to cover the value of wool thus requisitioned, provided payment is not to be made on delivery to the contractor. On receipt of this bond the wool-purchasing quartermaster will issue orders for shipment in accordance with requisition and the wool will be forwarded billed, and the receipt of the railroad for the correct number of packages will be his voucher of delivery in connection with the actual bill.

Payment for wool by manufacturers may be made on delivery of the wool or may be made at the time of delivery of the goods by deduction of the value of the wool furnished from the first invoices of completed goods delivered. This will be covered in the contract in each individual case.

If payment is to be made by contractor on delivery of the wool, the wool will be shipped and bill for same submitted to the contractor and payment made to the wool purchasing quartermaster. If payment is to be made through deduction from the amount due on first deliveries of the completed article, bill for the wool should be forwarded by the wool purchasing quartermaster to the contracting quartermaster for collection. The amount so collected will be transferred by the contracting quartermaster to the wool purchasing quartermaster, who will deposit it with the Treasurer of the United States to his official credit. Where settlement is to be made by deduction from the first bill for completed goods delivered, the wool purchasing quartermaster will enter a charge against the contracting quartermaster, which will be removed by receipt of check for amount deducted from bill for such first delivery of completed goods.

The various lots of wool will be available for manufacturers at the actual cost to the Government, including cost of bags and any storage charges that may accrue after the four months' period has expired, so that the dollar value of each lot will balance on shipment. The actual weight of wool varies according to climatic conditions, some wools gaining in weight, others losing in weight, and in order that the pounds bought may balance with the pounds sold, the wool will be shipped out at the same weight as bought by the Government, this to be definitely provided for in the contract. If any apparent errors in weight arise they will be adjusted by the original seller—this outside of variations of weight due to natural causes.

It will not be practicable to name a fixed price at which wool will be furnished, but a range of prices paid for the different grades will be available for the use of those concerned.

WOOL, ACCOUNTING FOR.

The wool purchased will be taken up on Q. M. C. Form 200 and accounted for as other Government property, to be classified as "grease wool," "scoured wool," and "tops." The voucher to be used in connection with wool property account will be Q. M. C. Form 217-A. The authority to be quoted on vouchers, as well as the authority to be quoted on Form 330 to the money account, will be a copy of the telegraphic authority of the Quartermaster General, dated August 10, 1917, directing Capt. W. B. Gracie, Quartermaster Corps. to proceed with the purchase of wool, and a true copy of these approved instructions. These authorities should be filed with the first voucher submitted. In subsequent vouchers it will be only necessary to make reference thereto.

A certificate properly signed by the committee on wool supply or its authorized secretary will be sufficient authority for the wool-purchasing quartermaster to make the purchases recommended by the committee.

Wool will be dropped from the wool-purchasing quartermaster's property account on a statement from him giving date and number of contract, accompanied by copy of call from contractor for wool and copy of bill of lading on which wool is shipped to contractor.

The wool-purchasing quartermaster will furnish monthly to the Quartermaster General a report showing the total purchases for the month, with amounts of the various grades on hand and the amounts and grades of lots accepted but not purchased.

Cartage and freight charges on all shipments of wool will be paid for by the manufacturer, as is customary in the trade. This will be included in each contract, to apply in all cases where manufacturers use Government wool.

CLERICAL HELP.

The wool-purchasing quartermaster, Boston, Mass., is authorized to employ as "special employees" such expert wool inspectors as in the judgment of the committee on wool supply may be necessary for the proper inspection of wool and to protect the Government's interests. He will submit a list of such employees, with amount of pay of each, to this office for approval. He is authorized to issue such travel orders as may be necessary, and while these special employees are traveling under such orders and when absent from their station they will be entitled to a flat per diem allowance of \$4 per day in lieu of subsistence, including date of departure from and date of return to their station. These accounts and all other expense accounts in connection with the activities of the wool purchasing office will be settled by the depot quartermaster, Boston, who will also furnish such supplies as are needed for the proper equipment and operation of the wool office. The wool-purchasing quartermaster, Boston, will issue the necessary transportation and Pullman requests to cover the travel of his special employees. Payment for storage charges accruing after a storage period of four months will be made by the wool-purchasing quartermaster.

DEALINGS WITH MANUFACTURERS.

The following instructions are for use of contracting quartermasters in dealing with contractors:

First.—When manufacturers offer goods at a price that is satisfactory to the contracting quartermaster and state that they have sufficient wool, tops, or yarn on hand necessary for the manufacture of the fabrics to bid on, such contracts should be immediately closed.

Second.—If a manufacturer names a price on a fabric that is acceptable to the contracting quartermaster and states that he has not the necessary wool on hand for the manufacture of the goods specified, he then should be informed that the committee on wool supply is now buying a reserve stock of wool for the War Department which will be available at cost to manufacturers with Government orders and who have not the necessary wool. The payment for this wool may be made on delivery of the wool or from the first deliveries of goods, a bond for the value of the wool to be given in the latter case. While this buying for the Government account is going on it is very undesirable to have active competition in the market from manufacturers who are given orders, and it is expected that such manufacturers will not enter the wool market actively but will send to the committee on wool supply samples of the wool they desire to use in their blends, stating quantities and also the price

at which they have figured these wools in their goods. The committee will notify such manufacturers whether they can depend on it for similar wools at practically the same prices figured. If the price figured is lower than the committee feels it can safeguard, then the manufacturer can go out and buy wool at the price he has figured, but not at any higher prices without first notifying the committee on wool supply.

In other words, a manufacturer going out for wool at a stated price which is below the market, as the committee finds it, does not run up the price of wool, but the exceeding of this price, without consultation with the committee, does create a rising market. If manufacturers are not willing to do this, then orders to them might be held up until the committee had sufficient wool in hand to safeguard itself against competition.

Filed herewith as a constituent part of these instructions and regulations are the various blank forms for the use of the Wool-Purchasing Office, numbered ———, and the letters (two in number) of Mr. Jacob F. Brown, dated August 4, 1917, to Mr. Charles Eisenman, Committee on Supplies, Council of National Defense, Washington, D. C., with accompanying letters of the Quartermaster General (two in number) dated August 7, 1917, and August 10, 1917, and approval of the Secretary of War, dated August 8, 1917.

Statement showing articles of clothing and equipage manufactured at the Philadelphia depot from July 1, 1916, to Sept. 27, 1917, with average price of each article and total cost.

Articles.	Quantity.	Price.	Total cost.
CLOTHING.			
Aprons:			
Bakers' and butchers'	10,640	\$0.64	\$6,809.60
Cooks'	18,300	.57	10,431.00
Band, cap	7,485	.21	1,571.85
Belts, walst	475,319	.18	85,557.42
Breeches:			
Cotton, foot	310,342	1.15	356,893.30
Cotton, mounted	44,849	1.32	59,200.68
Cotton, new pattern	38	1.67	63.46
Wool, foot	200,551	3.37	675,856.87
Wool, mounted	47,696	3.81	181,721.76
Wool, new pattern	58,004	4.93	285,959.72
Caps:			
Bakers' and cooks'	23,321	.22	5,130.62
Winter	9,158	.85	7,784.30
Chevrons:			
Cotton, olive-drab	249,664	.53	132,321.92
Denim	34,631	.11	3,809.41
Dress	13,103	.81	10,613.43
Gunners' (all kinds)	52,162	.07	3,651.34
White duck	1,631	.15	244.65
Wool, olive-drab	464,828	.54	251,007.12
Coats:			
Denim	19,649	1.34	26,329.66
Dress	3,045	5.50	16,329.50
Cotton, olive-drab	168,220	1.73	291,020.38
Wool, olive-drab	94,978	6.71	637,302.60
White	12,828	1.42	18,215.76
Hats, denim	7,906	.30	2,371.80
Overcoats, olive-drab	50,049	9.32	466,456.68
Ponchos (Goodyear)	4,432	4.10	18,171.63
Ponchos (Brunsene)	2,671	2.53	6,757.63
Shirts, flannel	663,808	3.54	2,349,880.32
Slickers	244	6.20	1,512.80
Stripes:			
Service	18,720	.06	1,123.20
Trouser	6,616	.36	2,381.76
Trousers:			
Cotton, olive-drab	124	1.31	162.44
Blue, denim	21,763	1.34	29,162.42
Dress	313	3.30	1,032.90
White	30,513	1.29	39,361.77
Wool, olive-drab	116	3.00	348.00
Total			5,986,967.27
EQUIPAGE.			
Bags:			
Barrack	224,901	.62	139,438.62
Recruit, clothing	4,847	3.10	15,025.70
Surplus, kit	14,459	3.05	44,099.95
Brassards	4,749	.08	379.92

Statement showing articles of clothing and equipage manufactured at the Philadelphia depot from July 1, 1916, to Sept. 27, 1916, with average price of each article and total cost—Continued

Articles.	Quantity.	Price.	Total cost.
EQUIPAGE—continued.			
Cases:			
Color.....	2,082	\$0.54	\$1,124.28
Standard.....	2,216	.46	1,019.36
Automobile.....	150	.20	30.00
Guldon.....	4,310	.22	948.20
Colors:			
National, service.....	1,840	8.00	14,720.00
National, silk.....	385	24.00	9,240.00
Regimental, Infantry, silk.....	47	151.81	7,135.07
Coast Artillery Corps, silk.....	1	170.00	1,170.50
Engineers, silk.....	9	173.00	.....
Covers:			
Cot.....	51,766	.92	47,624.72
Mattress.....	28,740	1.08	31,039.20
Ward tent.....	2,226	7.55	16,806.30
Flags:			
Automobile, brigadier generals'.....	279	.53	147.87
Automobile, chief umpire.....	2	.69	1.38
Automobile, major generals'.....	153	.60	91.80
Camp of instruction—			
Auxiliary division.....	88	2.42	212.96
Cavalry division.....	42	3.06	128.52
Infantry division.....	128	2.35	300.80
Provisional division.....	11	5.33	58.63
Automobile Artillery, district commanding.....	14	.77	10.78
Automobile guldon.....	11,382	.56	6,373.92
Chaplain.....	966	.53	511.98
Distinguishing—			
Ammunition train.....	455	1.52	691.60
Artillery brigade.....	78	1.97	153.66
Field army.....	3	3.60	10.80
Infantry brigade.....	164	1.73	283.72
Cavalry brigade.....	23	1.78	40.94
Post office.....	196	1.78	348.88
Supply train, quartermaster.....	1,200	2.98	3,576.00
Sanitary train.....	700	2.51	1,757.00
Telephone station.....	367	1.78	653.26
Hospital, field.....	133	2.48	329.84
Post.....	560	16.68	9,340.80
Storm.....	4,050	5.75	23,287.50
Recruiting, large.....	2,229	6.12	13,641.48
Recruiting, small.....	1,500	2.02	3,030.00
Advertising, large.....	1,097	9.35	10,258.95
Advertising, small.....	1,486	2.76	4,101.36
Files:			
Hospital, tropical.....	557	24.07	13,406.99
Storage.....	656	26.26	17,266.56
Wall, large.....	8,757	15.74	137,835.18
Wall, small.....	3,156	10.00	31,550.00
Guldons:			
Aero squadron service.....	49	1.92	94.08
Ambulance company service.....	172	1.87	321.93
Artillery service.....	449	1.57	704.93
Cavalry service.....	2,190	1.23	2,671.80
Engineers.....	297	1.86	552.42
Field hospital company.....	161	1.87	301.07
Signal Corps service.....	148	1.72	254.56
Telegraph Co.....	30	1.92	57.60
Cavalry, silk.....	209	8.07	1,686.63
Engineers, silk.....	48	33.16	1,591.68
Signal Corps, silk.....	32	11.82	378.24
Field hospital, silk.....	23	17.43	400.89
Ambulance company, silk.....	26	17.43	453.18
Aero squadron, silk.....	18	17.41	313.38
Telegraph company, silk.....	19	17.41	330.79
Field Artillery, silk.....	113	13.42	1,516.46
Pennants:			
Ammunition train.....	58	1.59	72.22
Artillery brigade.....	34	2.64	89.76
Cavalry brigade.....	6	2.70	16.20
Infantry brigade.....	67	2.13	142.71
Motor truck company, quartermaster Corps.....	766	2.17	1,662.22
Quartermaster supply depot.....	118	2.12	250.16
Rolls bedding.....	623	7.62	4,747.26
Rolls clothing.....	147	3.96	582.12
Sacks, bed.....	497,916	.73	363,478.68
Sacks, pillow.....	6,020	.27	1,625.40
Screens, canvas, latrine.....	427	14.53	6,204.31

Statement showing articles of clothing and equipage manufactured at the Philadelphia depot from July 1, 1916, to Sept. 27, 1917, with average price of each article and total cost—Continued.

Articles.	Quantity.	Price.	Total cost.
EQUIPAGE—continued.			
Standards:			
National service.....	1,014	\$5.63	\$5,708.82
National silk.....	169	15.44	2,609.36
Cavalry silk.....	11	99.90	1,098.80
Field Artillery.....	12	100.06	1,300.78
Signal Corps, battalion.....	2	100.22	200.44
Telegraph battalion.....	3	100.22	300.66
Tents:			
Shelter halves.....	139,320	2.25	313,470.00
Hospital, tropical.....	94	70.85	6,659.90
Hospital ward.....	585	165.91	97,057.35
Pyramidal.....	37,628	52.68	1,982,243.04
Storage.....	599	93.35	55,916.65
Wall, large.....	1,430	53.90	77,077.00
Wall, small.....	1,639	27.94	45,793.66
Hoods, pyramidal.....	2,559	1.60	4,094.40
Total.....			3,593,235.76

RECAPITULATION.

Clothing.....	\$5,986,967.27
Equipage.....	3,593,235.76
Grand total.....	9,580,203.03

Statement showing articles of clothing and equipage manufactured at the Jeffersonville depot from July 1, 1916, to Nov. 20, 1917, with average price of each article and total cost.

Articles.	Quantity.	Price.	Total cost.
CLOTHING.			
Coats, blue denim.....	51,620	\$1.25	\$64,525.00
Shirts, flannel.....	3,149,620	3.65	11,497,113.00
Trousers, blue denim.....	36,850	1.25	46,062.50
EQUIPAGE.			
Bags, barrack.....	31,177	1.62	50,506.74
Bed sacks.....	604,699	1.14	689,436.86

The following articles not of specification type have been purchased:

Cots, steel.....	949,000
Comforters.....	825,738
Moccasins, pairs.....	375,000
Mackinaws.....	175,954
Overcoats, sheepskin lined.....	27,105
Toques.....	200,000

Commercial blankets, drawers, undershirts, flannel and cotton shirts, spiral puttee leggins, and English pattern coats and overcoats have also been purchased.

Statement showing articles of clothing and equipage manufactured by contractors from July 1, 1916, to Sept. 30, 1917, with average price and total cost.

Articles.	Quantity.	Average price.	Total cost.
CLOTHING.			
Breeches, cotton.....	1,450,516	\$0.65	924,959.45
Breeches, cotton, new pattern.....	2,354,232	.75	1,765,674.00
Breeches, woolen, new pattern.....	685,500	.84	575,820.00
Chevrons:			
Cotton.....	1,073	.04	42.92
Woolen.....	1,874,806	.03	56,244.18
Coats:			
Cotton.....	2,128,289	.785	1,670,706.87
Jerkin.....	487,000	4.87	2,371,690.00
Mackinaw.....	111,767	1.95	217,945.65
Woolen.....	1,589,300	1.65	2,622,345.00
Overcoats.....	1,929,344	1.96	3,781,914.24
Shirts, flannel.....	1,083,702	.48	520,176.96
Total.....			14,487,519.27
EQUIPAGE.			
Bags:			
Barrack.....	1,441,816	.08	115,345.28
Surplus kit.....	285,601	1.375	392,701.38
Recruit clothing.....	2,815	.80	2,252.00
Bars, mosquito.....	826,024	.57	470,833.68
Sacks, bed.....	1,864,184	.12	223,702.08
Tents:			
Hospital, ward.....	100	98.00	9,800.00
Pyramidal.....	101,049	17.00	1,717,833.00
Shelter, halves.....	6,280,370	.45	2,826,166.50
Storage.....	1,220	29.00	35,380.00
Wall, large.....	2,130	15.00	31,950.00
Wall, small.....	42,525	14.00	595,350.00
Total.....			6,421,313.90
Clothing.....			\$14,487,519.27
Equipage.....			6,421,313.90
Grand total.....			20,908,833.17

Statement showing contracts awarded for clothing and equipage by the Philadelphia depot upon recommendations of the Council of National Defense from July 1, 1916, to Oct. 31, 1917.

Articles.	Total quantity.	Average price.	Total cost.
CLOTHING.			
Blankets.....	9,925,487	\$6.13	\$60,805,976.00
Boots, rubber:			
Hip.....pairs..	397,960	4.66	1,856,830.00
Knee.....do....	10,000	2.94	29,400.00
Drawers:			
Cotton.....do....	7,041,822	.55	3,839,610.00
Fleece lined.....do....	1,389,242	.436	606,483.00
Woolen.....do....	12,741,250	1.39	17,748,474.00
Gauntlets, winter.....do....	32,000	3.08	98,600.00
Gloves, wool.....do....	10,119,200	.61	6,129,868.00
Moccasins.....do....	275,000	.96	265,329.00
Overshoes, arctic.....do....	87,000	2.16	187,600.00
Shirts:			
Cotton.....	231,820	.68	337,884.00
Flannel.....	639,755	2.80	1,791,314.00
Shoes:			
Field.....pairs..	8,011,000	4.58	36,709,824.00
Russet.....do....	9,409,050	4.65	43,711,224.00
Stockings:			
Cotton.....do....	6,431,428	.16	1,029,724.00
Woolen, heavy weight.....do....	20,526,988	.53	10,783,374.00
Woolen, light weight.....do....	22,172,636	.30	6,596,861.00
Toques.....	300,000	.40	118,525.00
Undershirts:			
Cotton.....	7,380,493	.47	3,475,888.00
Fleece lined.....	1,445,090	.45	643,108.00
Woolen.....	10,517,564	1.384	14,556,683.00
Total.....			211,322,079.00
EQUIPAGE.			
Cots.....	75,000	2.05	153,750.00
MATERIALS.			
Bobbinette.....yards..	110,000	.307	33,787.00
Cloth, cotton, O. D.....do....	2,610,000	.27	695,550.00
Cotton shirting.....do....	15,000	.195	2,925.00
Drilling, unbleached.....do....	12,236,000	.19	2,337,275.00
Duck:			
No. 6.....do....	576,000	.91	524,990.00
8 ounce.....do....	8,290,500	.27	2,233,882.00
12.4 ounce.....do....	11,341,500	.513	5,719,825.00
Shelter tent.....do....	14,925,000	.42	6,086,195.00
Flannel shirting.....do....	13,106,364	1.64	21,445,941.00
Lining for jerkins.....do....	36,958	3.40	125,550.00
Melton:			
16 ounce.....do....	9,829,500	2.712	26,764,615.00
30 ounce.....do....	16,057,900	3.508	56,337,790.00
Serge, Custré wool, light weight.....do....	11,000	1.70	18,700.00
Soles, half, shoe.....pairs..	3,480,000	.45	1,557,500.00
Twill, cotton, O. D.....yards..	140,000	.22	30,800.00
Top lifts, shoe.....pairs..	3,400,800	.13	431,382.00
Total.....			124,346,707.00

RECAPITULATION.

Clothing.....	\$211,322,079.00
Equipage.....	153,750.00
Materials.....	124,346,707.00
Grand total.....	335,822,536.00

Statement of clothing and equipage shipped overseas by depots from date of first convoy to Jan. 15, 1918.

CLOTHING.

Belts, waist -----	122, 268	Laces :	
Blankets -----	520, 253	Breeches -----	359, 413
Boots, rubber :		Leggins -----	1, 561
Hip -----	152, 224	Shoe -----	267, 632
Knee -----	9, 556	Leggings :	
Breeches, wool -----	227, 359	Canvas -----	79, 907
Caps :		Leather -----	1, 000
Denim -----	11, 872	Spiral, puttee -----	234, 752
Winter -----	222, 212	Moccasins -----	201, 161
Chevrons, wool -----	74, 109	Overcoats -----	140, 574
Coats :		Overshoes, Arctic -----	355, 868
Blue, dress -----	1, 824	Shirts, flannel -----	215, 957
Wool -----	132, 047	Shoes, field -----	898, 821
Denim -----	70, 350	Slickers -----	84, 839
Drawers, wool -----	856, 361	Stretchers, shoe -----	335
Gauntlets, winter -----	184, 437	Toques -----	135, 673
Gloves :		Trousers :	
Riding -----	91, 583	Denim -----	100, 456
Wool -----	279, 919	Blue, dress -----	3, 024
Horsehide, fleece-lined -----	2, 902	Undershirts, wool -----	681, 224
Yellow, horsehide -----	30, 902	Stockings, wool, heavy weight -----	941, 512
Hats, service -----	158, 698		
Jerkins -----	201, 155		

NOTE.—In addition to the above each man was ordered supplied with 2 complete suits woolen uniforms, 1 overcoat, 3 suits woolen underwear, and 5 pairs heavy wool socks.

Gen. Pershing was authorized to purchase in Spain 200,000 blankets and 200,000 suits woolen uniforms in England.

EQUIPAGE.

Axes -----	9, 100	Cords and tassels, worsted -----	66
Bags :		Cords, hat -----	149, 943
Barrack -----	52, 000	Covers :	
Surplus, kit -----	3, 639	Tent, ward hospital -----	213
Water, sterilizing -----	1, 475	Mattress -----	200
Batons -----	23	Desks, field :	
Bedding rolls -----	77	Large -----	294
Bed sacks -----	258, 333	Small -----	647
Brassards, red -----	2, 131	Drilling, unbleached ----- yds -----	150, 686
Braid, officers' coats ----- yds -----	3, 200	Elbows, stovepipe -----	1, 194
Brooms, corn -----	30, 081	Felt, gray ----- yards -----	5, 001½
Brushes, scrubbing -----	4, 138	Flags :	
Bugles, with slings -----	636	Chaplain -----	27
Buttons :		Camp of instruction -----	13
Bronze, for field clerks -----	2, 000	Distinguishing -----	4
Bronze, small -----	1, 212, 000	Regimental, silk -----	5
Bronze, large -----	1, 037, 168	Flies, tent :	
Carbona, pints -----	1, 000	Hospital -----	16
Cases :		Storage -----	312
Pillow -----	1, 200	Wall, small -----	929
Color -----	60	Wall, large -----	309
Standard -----	11	Globes, lantern, distinguish- ing -----	1, 249
Cards, index, guide -----	50	Guidons, ambulance and staffs -----	51
Chairs, barrack -----	1, 087	Helves :	
Clasps, collar -----	500	Ax -----	19, 597
Colors :		Hatchet -----	600
Camp and staff -----	427	Pickax -----	14, 593
National service -----	73	Housewives -----	4, 286
National, silk -----	7	Hypochloride of lime, tubes -----	1, 302, 200

Instruments, band sets -----	20	Poles, tent:	
Insignia for officers:		Hospital, ward-----	4, 288
Stars -----	60	Hospital, ward, wall---	1, 386
Chaplains -----	50	Shelter -----	59, 560
General staff -----	50	Pyramidal, large -----	4, 744
Aid de camp-----	50	Storage -----	2, 657
Inspector, general -----	30	Wall, small -----	3, 167
Judge Advocate General -----	10	Pouches, music -----	984
Bars, lieutenant -----	2, 000	Ranges, field, No. 2-----	84
Leaves—		Screens, canvas, latrine---	640
Lieutenant colonel-----	150	Shields, tent -----	119
Major -----	384	Shirting flannel -----	59, 232
Letters—		Shoe-repair materials:	
U. S. R.-----	5, 000	Heel lifts, pairs-----	332, 640
U. S. -----	4, 752	Half soles-----	260, 352
Engineer Corps -----	994	Blocks, leather-----	60
Dental Corps -----	46	Shovels, short-handle-----	3, 529
Twenty - eighth Infan-		Silesia, O. D.-----	145, 064
try -----	969	Slings, color-----	62
Sixth Field Artillery---	984	Spades, long-handle-----	1, 202
Seventh Field Artillery	996	Stands, music-----	1, 196
Adjutant General-----	50	Standards, national, silk---	1
Joints, stovepipe -----	5, 756	Standards, national, service---	3
Melton, yards:		Standards, staffs-----	5
30-----oz-----	86, 452	Sticks, size, shoe-----	258
16-----oz-----	211, 353	Tags, identification, with	
Oil, Neatsfoot -----gals---	8, 634	tape -----	86, 917
Ornaments, collar -----	7, 612	Tapes, foot measuring-----	162
Pickaxes and helves-----	7, 401	Tents:	
Pins, tent:		Hospital, ward-----	669
Hospital, ward -----	7, 700	Wall -----	1, 075
Small -----	388, 522	Storage -----	254
Large -----	415, 350	Pyramidal -----	4, 719
Shelter -----	327, 990	Shelter, halves -----	20, 160
Poles, latrine screen:		Whistles and chains-----	4, 956
Horizontal -----	3, 945		
Upright -----	7, 245		

Statement showing clothing and equipage supplies required for 1,612,245 men for one year, including reserve stock.

CLOTHING.			
Aprons:		Gantlets, winter---pairs---	3,825, 000
Bakers and butchers---	34, 931	Gloves:	
Cooks-----	57, 057	Horsehide, yellow---	1, 074, 990
Belts, waist-----	5, 701, 060	Riding-----pairs---	6, 630, 570
Blankets-----	10, 199, 574	Wood, O. D.-----	10, 318, 590
Boots, rubber, half hip,		Hats, service -----	8, 358, 810
pairs -----	3, 738, 680	Jerkins -----	3, 225, 000
Breeches:		Laces:	
Cotton -----	3, 633, 750	Field, shoe---pairs---	20, 376, 360
Woolen -----	18, 324, 630	Marching, shoes-----	6, 840, 000
Caps:		Leggins:	
Bakers and cooks---	579, 215	Canvas, foot---pairs---	77, 797, 170
Service -----	3, 000, 000	Canvas, mounted,	
Winter -----	5, 700, 000	pairs -----	1, 590, 000
Chevrons:		Moccasins -----pairs---	18, 000, 000
Cotton-----	548, 704	Oil, neat's-foot---pints---	6, 464, 550
Wool -----	5, 730, 729	Overalls, denim -----	14, 380, 103
Coats:		Overcoats -----	8, 010, 000
Denim -----	11, 905, 103	Overshoes, Arctic-----	1, 500, 000
Service, cotton-----	2, 244, 375	Shirts, flannel, O. D.---	16, 276, 860
Service, woolen, O. D---	13, 871, 755	Shoes:	
White -----	117, 572	Marching-----pairs---	3, 420, 000
Cords, hat-----	8, 210, 000	Field -----do-----	20, 339, 400
Drawers:		Slickers-----	8, 133, 975
Summer -----	15, 525, 000	Stockings:	
Winter -----	35, 905, 320	Cotton -----pairs---	4, 097, 160
		Wool, heavy -----	26, 834, 520
		Wool, light -----	27, 177, 765

Tags, identification, with tape -----	8,514,705	Flags -----	11,912
Toques -----	4,500,000	Globes, lantern, distinguishing -----	5,178
Trousers, white duck -----	117,572	Guldons -----	24,939
Undershirts:		Helves, pickaxe -----	528,000
Cotton -----	4,880,750	Hypochloride of lime, tube -----	84,000,000
Winter -----	27,419,610	Instruments, hand, sets -----	1,920
EQUIPAGE.		Pennants, camp, construction -----	147
Axes and helves -----	341,000	Pickaxes and helves -----	361,815
Bags:		Pins, tent:	
Barrack -----	592,005	Large -----	29,552,502
Recruit, clothing -----	329,376	Small -----	28,152,147
Surplus kit -----	317,520	Shelter -----	24,402,750
Water, sterilizing -----	133,626	Pouches, music -----	102,375
Bars, mosquito, single -----	5,062,500	Shovels -----	332,745
Batons -----	72,270	Slings, color, O. D. -----	13,676
Bedsacks -----	7,532,750	Spades -----	75,780
Brassards:		Stands, music -----	97,245
Red -----	85,688	Standards -----	2,142
Blue -----	30,675	Sticks, shoe, size -----	36,315
Mounted, messengers -----	72,413	Shields, galvanized iron -----	137,250
Newspaper correspondent -----	72,413	Stoves, tent -----	503,970
Brooms, corn -----	1,345,275	Stovepipe:	
Brushes, scrubbing -----	420,750	Elbows -----	229,500
Bugles, with slings -----	72,795	Joints -----	2,345,400
Cement, ambroid, ounces -----	499,647	Spark arresters -----	526,500
Colors, camp with staff -----	9,900	Stretchers, shoe -----	36,315
Colors, complete:		Tapes, foot, measure -----	36,315
Battalion of Engineers, silk -----	162	Tents, complete:	
Infantry, regimental, silk -----	684	Hospital, tropical -----	3,128
National, silk -----	840	Hospital, ward -----	745,054
National, service -----	2,250	Pyramidal -----	740,250
Containers, neat's foot, oil -----	127	Shelter, halves -----	4,880,550
Cots -----	5,062,500	Storage -----	99,489
Covers:		Wall, large -----	20,700
Cot -----	5,062,500	Wall, small -----	164,475
Folded, ward, tent -----	5,108	Screens, latrine -----	138,717
Desks, field:		Whistles, and chains:	
Large -----	11,691	Acme -----	332,334
Small -----	73,296	Siren -----	55,988
		Kinglets -----	62,400

Statement showing issue of clothing and equipage supplies, July to September, 1917, inclusive.

CLOTHING.		Caps—Continued.	
Aprons:		Service, O. D. wool -----	537
Bakers and butchers -----	8,260	Winter -----	2,313
Cooks -----		Chevrons:	
Band, cap -----	139	Cotton, O. D. -----	136,722
Belt, waist -----	460,446	Denim -----	27,612
Blouses -----	23,628	Dress -----	8,487
Boots, one-half hip and rubber knee -----	1,208	White duck -----	530
Breeches, cotton:		Woolen -----	330,888
Foot, O. D. -----	75,952	Coats:	
Mounted, O. D. -----	1,278,258	Dress -----	5,791
Breeches, woolen:		Service, cotton, O. D. -----	460,430
Foot, O. D. -----	35,119	Service, wool, O. D. -----	227,975
Mounted, O. D. -----	246,609	White duck -----	6,557
Caps:		Collars, linen -----	272
Bakers and cooks -----	8,383	Cords:	
Dress, without band -----	5,140	Hat -----	673,723
		Hat tying -----	34

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Cravat, black	254
Drawers:	
Canton flannel	225,653
Jean, summer	1,715,009
Wool, knlt, winter	380,622
Frock, stable	500
Gantlets, winter	6,399
Gloves:	
Cotton, white	3,926
Horsehide, yellow	12,660
Riding	51,540
Woolen, O. D.	285,174
Jumpers	69,960
Hats:	
Denim,	37,488
Service	671,092
Oiled	125
Laces:	
Breeches	409,486
Leggin	451,499
Shoe (all kinds)	1,180,494
Leggings:	
Canvas	99,953
Foot	459,554
Mounted	30,128
Leather	6,047
Ornaments, cap, bronze	4,538
Collar, bronze letters	
U. S.	7,571
Overalls	1,417
Overcoats:	
Canvas, for blanket ld	94
Wool, olive-drab, etc.	184,588
Overshoes, arctic	9,965
Poncho	218,902
Shirts:	
Chambray	264
Flannel, O. D.	933,349
Muslin	616
Cotton, O. D.	77,369
Shoes:	
Field	149,476
Gymnasium	1,990
Russet	982,576
Commercial last	3,671
Slicker	88,535
Stockings:	
Cotton	1,578,032
Wool, heavy	403,034
Wool, light	1,374,806
Stripes:	
Service	140
Trousers	3
Suspenders	307
Sweaters, O. D.	509
Tags, identification	896,687
Tape, identification	139,459
Trousers:	
Cotton, O. D.	46
Denim	74,387
Dress, 16-ounce	16,401
Dress, 22-ounce	2,835
White	8,991
Woolen, O. D.	45
Toggles	181,100
Undershirts:	
Cotton, summer	1,804,376
Wool, winter	492,559
Cotton, winter	145,911
EQUIPAGE.	
Arrestors, spark	11,519
Axes	59,175
Bags:	
Barrack	249,735
Recruit clothing	20,917
Surplus kit	18,687
Water, sterilizing	566
Band, silver, color staff	105
Bars (mosquito)	70,919
Double	877
Single	301,000
Basin, canvas	208
Bedstead, iron parts:	
Double deck	1,599
Single deck	5,889
Bedstead, fabric parts	73,941
Brackets, flagpole	469
Brassards	96
Mounted messenger	1,157
Correspondent	56
Bridles, riding	15
Brooms, corn	106,646
Brushes, scrub	55,431
Bucket, canvas	708
Bugles:	
With sling	1,609
Without sling	4,807
Bugle parts:	
Mouthpiece	154
Slings	4,996
Strap mouthpiece	24
Cases:	
Color and distin- guishing flag	1,855
Standards distin- guishing flags	2
Pillows	81,697
Cement, Arbraid, 2-ounce cans	4,005
Chair, barrack	12,655
Chair parts	28,508
Colors	974
Cord and tassels	302
Comforters	
Cots	288,682
Cots, parts for	639,045
Covers:	
Water sterilizing	102
Folded ward tent	73
Mattress	47,851
Desks, field:	
Large	545
Small	2,593
O. P.	18
Files, tent:	
Hospital, tropical	184
Storage	137
Wall, large	3,606
Wall, small	6,883

Devices, halyards-----	65	Rolls:	
Ferrules, tentpole-----	4, 842	Bedding (officers') --	191
Flags -----	3, 487	Clothing (officers') --	1, 259
Guidons, service:		Sack bed -----	537, 822
Ambulance Corps, with		Screens, canvas, latrine--	5, 973
case-----	1, 114	Sheet-----	155, 444
Cavalry, with case---	140	Shields, tent -----	102
Engineer Corps,		Shovels:	
mounted, with case---	50	Long handle -----	4, 773
Field Artillery serv-		Short handle-----	36, 653
ice -----	129	Slings:	
Field Hospital Corps		Bugle -----	5, 024
and case, service---	51	Color, O. D.-----	8, 365
Motor truck company---	397	Sleeves, hospital and stor-	
Signal Corps service---	69	age ridge -----	57
Halyards -----	917	Spearheads -----	42
Handles, shovel:		Spades -----	9, 527
Long -----	23	Color, auto and ambu-	
Short -----	1, 602	lance-----	6, 189
Spade -----	763	Spindle tent pales-----	2, 576
Hatchet -----	1, 356	Stamp company marking---	10
Head net, mosquito-----	30, 155	Stands, music-----	1, 474
Hoods, tent, conical and		Standards:	
pyramid -----	150	National with case:	
Helves:		Service -----	131
Ax -----	50, 038	Silk-----	50
Hatchet-----	2, 678	Cavalry -----	3
Pickax -----	40, 754	Engineer battalion,	
Locket, trunk -----	18, 395	mounted, with case---	2
Locket, parts -----	21, 182	Field artillery, regi-	
Mattresses, cot-----	35, 487	mental, with case --	15
Oil, neat's-foot---gallon---	4, 756	Signal Corps battal-	
Pennants -----	55	ion, with case-----	2
Pickaxes-----	36, 254	Sticks:	
Pillows -----	45, 911	Shoe size-----	5, 870
Pins, tent:		Night -----	190
Large -----	2, 452, 744	Stoves, tent-----	70, 931
Small -----	2, 273, 252	Stovepipe:	
Shelter, aluminum---	1, 584, 805	Elbows-----	4, 303
Wood -----	134, 471	Joints-----	231, 356
Poles:		Stretcher, shoe-----	5, 164
Flag-----	96	Straps, tent, shelter -----	92
Conical -----	28	Straps, bugles (for mouth	
Hospital trop.-----	4	pieces) -----	24
Ridge-----	992	Tape, foot measure-----	2, 736
Upright-----	585	Tents:	
Wall, small -----	2, 266	Conical-----	333
Hospital, ward:		Tropical, com-----	69
Upright-----	56	Ward, com -----	35
Small -----	2, 221	Pyramidal-----	37, 881
Pyramidal, large and N. P.	41, 640	Shelter halves -----	275, 170
Shelter -----	729, 753	Storage, com-----	495
Storage:		Wall, large -----	1, 992
Ridge-----	208	Wall, small-----	5, 054
Upright-----	632	Munson -----	2
Wall, small-----	2, 243	Whistles and chains:---	24, 761
Wall, large:		Acme -----	60
Ridge-----	1, 371	Kinglet-----	10, 231
Upright-----	2, 811	Siren -----	2, 512
Wall, small -----	365	Tripods, tent, pyramidal---	283
Ridge-----	7, 918		
Upright-----	14, 854		
Latrine-----	8		
Pouches, music:			
Large -----	2, 670		
Powder hyp. of lime-----	52, 545		
Receiver, card, bedstead---	35, 408		

TOILET ARTICLES.

Housewives-----	5, 763
Kits, recruit, toilet, com-	
plete -----	2, 674

Cost of floors and tent frames during fiscal year ended June 30, 1916, for heavy tentage required for a division of Infantry consisting then of 744 officers and 22,400 men.

Tent floors.		Number.	Cost.
Common.....			
Hospital.....	16	\$113.60	
Pyramidal, large.....	3,243	34,764.96	
Pyramidal, small.....	700	2,450.00	
Storage.....	24	316.80	
Wall.....	78	273.00	
Ward.....	24	658.80	
Tent frames.			
Common.....			
Hospital.....	16	86.40	
Pyramidal, large.....	3,243	19,360.71	
Pyramidal, small.....	700	2,275.00	
Storage.....	24	158.40	
Wall.....	78	253.60	
Ward.....	24	254.88	
Total.....	8,170	60,966.05	

Cost per man (\$60,966.05÷22,400), \$2.7216986.

Cost—Tent floors and frame materials only; labor not included.

Tents.		Costs.		
Kind.	Number.	Floors.	Frames.	Total.
Common.....				
Hospital.....	16	\$223.20	\$86.40	\$309.60
Pyramidal, large.....	3,243	52,536.00	18,971.55	71,508.15
Pyramidal, small.....	700	4,095.00	2,520.00	6,615.00
Storage.....	24	540.00	367.20	907.20
Wall.....	78	491.40	298.80	790.20
Ward.....	24	1,215.27	918.00	2,133.27
Total.....	4,085	59,101.47	23,161.95	82,263.42
Cost per man (22,400 men).....		2.638	1.034	3.672

*Statement showing increase in cost of principal articles of clothing, equipage,
and materials during past 12 months.*

	July, 1916.	July, 1917.	Increase during year.
			<i>Per cent.</i>
Bars, mosquito, single.....each..	\$3.50	\$3.65	4
Blankets, O. D.....do.....	3.80	6.25	64
Brooms, corn.....do.....	.28	.67	140
Cloth, cotton, O. D.....per yard..	.19	.32	68
Cot.....each.....	2.95	3.70	26
Denim, blue.....per yard..	.1967	.28	43
Drawers, summer.....per pair..	.32	.50	56
Drawers, winter.....Do.....	.4375	1.50	243
Duck, khaki, 8-ounce.....per yard..	.2022	.29	43
Duck, khaki, 12.4-ounce.....do.....	.3292	.45	37
Duck, shelter, tent.....do.....	.2922	.34	16
Flannel, shirting, O. D.....do.....	1.29	1.65	28
Gloves, riding.....per pair..	1.72	2.15	25
Gloves, wool.....do.....	.495	.54	9
Hat, service.....do.....	1.40	1.65	18
Leggins, canvas.....do.....	.72	1.02	42
Melton, O. D., 16-ounce.....per yard..	1.52	2.65	74
Melton, O. D., 30-ounce.....do.....	2.06	3.50	70
Serge, luster, wool.....do.....	.45	.61	36
Shoes, russet.....per pair..	3.77	4.75	26
Shoes, field.....do.....	3.61	4.72	31
Stockings, cotton.....do.....	.063	.13	57
Stockings, wool, light.....do.....	.1785	.30	68
Stockings, wool, heavy.....do.....	.315	.43	37
Undershirts, cotton.....each.....	.307	.50	63
Undershirts, wool.....do.....	.90	1.50	78

Prices of clothing.

	Prices Mar. 5, 1917.	High.	Lowest.
Blankets.....	\$4.60	\$7.00	\$3.50
Breeches, cotton, mounted.....	.60	.7535	.65
Breeches, wool, mounted.....	.84	1.03	.924
Breeches, cotton, new.....	None.	.80	.75
Breeches, wool, new.....	None.	.965	.84
Coats, cotton.....	.77	.874	.75
Coats, wool.....	1.54	2.10	1.649
Drawers, summer.....	.345	.623	.37
Drawers, winter.....	None.	1.765	1.02
Gloves, wool.....	.45	.77	.45
Hats.....	1.294	1.96	1.625
Leggings, foot.....	.90	1.06	.90
Leggings, mounted.....	2.23	2.25	1.90
Overcoats.....	1.74	2.75	1.81
Shirts, flannel.....	None.	.58	.40
Shoes, russet.....	4.86	5.24	4.25
Shoes, field.....	None.	4.725	4.60
Slickers.....	3.70	4.15	3.68
Stockings, cotton.....	.12	.19	.10
Stockings, wool, light weight.....	.27	.825	.187
Stockings, heavy weight.....	None.	.55	.23
Undershirts, cotton.....	.305	.623	.37
Undershirts, wool.....	None.	1.72	1.10
Cloth, cotton, O. D.....	.215	.35	.21
Cloth, melton, 16 ounces.....	1.96	2.85	2.13
Cloth, melton, 30 ounces.....	3.40	3.97	3.36
Duck, shelter.....	.31	.56	.26
Duck, 12.4 ounces.....	.384	.67	.23
Duck, 8 ounces.....	.263	.41	.20
Duck, No. 4, 42 ounces.....	.766	.937	.79
Shirting, flannel.....	1.35	1.90	1.25

Statement showing articles of clothing and equipage shipped abroad to Oct. 31, 1917, together with average price and total cost.

Articles.	Quantity.	Average price.	Total cost.
<i>Clothing.</i>			
Belts, waist.....	42,218	\$0.25	\$10,554.50
Boots, rubber, half-hip.....	19,140	4.43	84,790.20
Breeches, wool.....	82,367	4.35	358,296.45
Chevrons, wool.....	8,115	.03	243.45
Coats, denim.....	31,670	1.25	39,587.50
Coats, wool.....	55,614	1.65	91,763.10
Cords, hat.....	17,033	.07	1,192.31
Drawers, winter.....	289,519	1.50	434,278.50
Gloves, yellow, horsehide.....	9,352	1.26	11,783.52
Gloves, riding.....	1,700	2.10	3,570.00
Gloves, woolen, O. D.....	43,985	.64	28,150.40
Hats, service.....	45,348	1.65	74,824.20
Jerkins.....	7,408	4.87	36,076.96
Laces, shoe, field.....gross	30,132	2.13	445.70
Leggings, canvas.....pairs	47,107	1.58	74,429.06
Moccasins.....do.	191,960	1.00	191,960.00
Overcoats.....	34,854	27.00	941,058.00
Oil, neatsfoot.....gallon	5,416	1.27	8,998.56
Shirts, flannel.....	68,206	2.87	195,751.22
Slickers and ponchos.....	75,254	3.82	288,222.82
Shoes, field.....	265,141	4.65	1,232,906.65
Stockings, wool, heavyweight.....	205,434	.45	92,445.30
Toques.....	4,758	.84	3,996.72
Tags, identification.....M	15,320	6.90	106.71
Trousers, denim.....	19,809	1.25	24,761.25
Undershirts, wool.....	32,314	1.50	48,471.00
Total.....			4,278,662.08
<i>Equipage.</i>			
Bags, water sterilizing.....	200	\$3.83	\$766.00
Bags, surplus kit.....	639	4.50	2,875.50
Batons.....	6	7.10	42.60
Bedsacks.....	82,733	.12	9,927.96
Blankets.....	116,143	6.00	696,858.00
Brassards, red.....	165	.17	28.39
Bugles, with slings.....	286	4.50	1,287.00
Desks, field, large.....	44	15.85	697.40
Desks, field, small.....	267	10.00	2,670.00
Flags, chaplain.....	4	.53	2.12
Instruments, band sets.....	2		
Pickaxes and helves.....	4,453	.75	3,339.75
Helves and pickax.....	7,873	.17	1,338.41
Hydrochlorite of lime, tubes.....	347,000	.013	4,511.00
Pins, tent shelter.....	42,990	44.30	1,904.46
Poles, tent shelter.....	18,380	.25	4,595.00
Pouches, music.....	89	3.75	337.75
Shovels, short handled.....	879	.80	703.20
Slings, color.....	39	6.50	253.50
Stands, music.....	126	1.65	207.90
Sticks, shoe size.....	25	.70	17.50
Stretchers, shoe.....	103	.40	41.20
Spades, long handled.....	1,202	.80	961.60
Tape, foot measuring.....	162	.0275	4.46
Tents, shelter halves.....	4,920	.45	2,214.00
Tents, storage.....	18	29.00	522.00
Screens, latrine.....	151	14.53	2,194.03
Whistles and chains.....	1,480	.28	414.40
Total.....			738,715.13
Grand total.....			5,017,377.21
Clothing.....			4,278,662.08
Equipage.....			738,715.13
Grand total.....			5,017,377.21

¹ Per pint.

Statement showing quantities of clothing and equipage contracted for by the Quartermaster Corps from July 1, 1916, to Oct. 31, 1917, inclusive

[Contracts placed under opening of Mar. 5, 1917, paid from 1918 appropriations, are also shown.]

Articles	Contracts placed from July 1, 1916, to Oct. 31, 1917 (exclusive of Mar. 5 opening).			Contracts placed under opening of bids of Mar. 5, 1917.			Grand total of contracts placed including Mar. 5 opening.		
	Quantity.	Average price.	Total cost.	Quantity.	Average price.	Total cost.	Quantity.	Total cost.	
Clothing.									
Aprons, bakers.....	19,280	\$0.44	\$8,483.20				19,280	\$8,483.20	
Aprons, cooks.....	17,200	.37	6,364.00				17,200	6,364.00	
Belts, waist.....	3,610,850	.25	902,712.50				3,610,850	902,712.50	
Blankets.....	9,960,544	4.00	39,842,176.00	160,000	\$4.00	\$760,000.00	10,120,544	40,602,176.00	
Boots, rubber, knee.....	10,686	2.88	30,785.28				10,686	30,785.28	
Boots, rubber, half, hip.....	387,960	4.43	1,718,602.20				387,960	1,718,602.20	
Breeches, cotton (manufacturing).....	1,450,821	.65	943,033.65	186,000	1.00	\$1,860,000.00	1,636,821	2,803,033.65	
Breeches, cotton (complete).....	15,000	2.17	32,550.00				15,000	32,550.00	
Breeches, cotton, new pattern (manufacturing).....	3,762,062	1.75	6,583,608.50				3,762,062	6,583,608.50	
Breeches, cotton, new pattern (complete).....	40,000	1.75	70,000.00				40,000	70,000.00	
Breeches, woolen (manufacturing).....	2,296,610	1.87	4,294,660.70	167,000	.75	\$125,250.00	2,463,610	4,419,910.70	
Breeches, woolen, new pattern (complete).....	3,008,500	4.35	13,086,750.00				3,008,500	13,086,750.00	
Breeches, woolen, new pattern (manufacturing).....	15,936	1.84	29,321.28				15,936	29,321.28	
Caps, bakers.....	5,145	.18	926.10	50,000	.085	\$4,250.00	55,145	\$4,342.10	
Caps, service.....	816,000	1.06	864,960.00				816,000	864,960.00	
Caps, winter.....	1,073	1.04	1,116.32				1,073	1,116.32	
Chevrons, cotton (manufacturing).....	1,874,806	1.08	2,023,790.48				1,874,806	2,023,790.48	
Chevrons, woolen (manufacturing).....	2,970,289	1.785	5,299,800.76	100,000	1.75	\$175,000.00	3,070,289	5,474,800.76	
Coats, cotton (manufacturing).....	26,290	2.25	59,152.50				26,290	59,152.50	
Coats, cotton (complete).....	669,485	1.25	836,856.25				669,485	836,856.25	
Coats, denim, blue.....	951,089	1.25	1,188,861.25				951,089	1,188,861.25	
Coats, denim, brown.....	55,935	1.02	57,053.70				55,935	57,053.70	
Coats, white, duck.....	487,000	1.487	722,386.00				487,000	722,386.00	
Coats, jerkin (manufacturing).....	141,674	1.96	277,681.04				141,674	277,681.04	
Coats, mackinaw (manufacturing).....	19,805	10.25	202,801.25				19,805	202,801.25	
Coats, mackinaw (complete).....	34,280	12.50	428,500.00				34,280	428,500.00	
Coats, woolen (manufacturing).....	2,144,500	1.15	2,466,075.00	235,200	1.54	\$362,208.00	2,379,700	2,828,283.00	
Cords, hats.....	3,602,580	.07	252,180.60	180,000	.065	\$11,700.00	3,782,580	263,880.60	
Cravats.....	78,743	.25	19,685.75				78,743	19,685.75	
Drawers, cotton.....	9,564,267	.49	4,686,491.83	825,000	.845	\$696,750.00	10,389,267	5,383,241.83	
Drawers, wool.....	7,769,905	1.50	11,654,857.50				7,769,905	11,654,857.50	
Drawers, cotton, ribbed.....	1,785,003	.57	1,017,051.71				1,785,003	1,017,051.71	
Drawers, flannel lined.....	1,356,520	.54	732,720.80				1,356,520	732,720.80	
Gauntlets, winter.....	516,180	3.00	1,548,540.00				516,180	1,548,540.00	

Gloves, riding.....	1,765	26	625.40	24,000	1.44	34,560.00	1,765	625.40
Gloves, woolen.....	29,776	1.36	37,517.76	50,000	1.895	94,750.00	53,776	72,077.76
Hats, blue, denim.....	645,861	.64	1,355,338.10	136,000	.45	60,760.00	645,861	1,400,098.10
Hats, service.....	8,852,963	.38	5,345,893.33	136,000			3,457,963	5,405,645.33
Hats, blue, denim.....	62,000	1.65	24,180.00	136,000	1.2976	227,032.50	62,000	24,180.00
Hats, service.....	2,112,540	1.65	3,485,851.00	136,000			2,247,540	3,712,918.50
Laces, breeches, gross.....	22,569	1.58	35,659.00				22,569	35,659.00
Laces, shoe.....	3,566	2.15	7,668.95				3,566	7,668.95
Leggings, canvas, foot.....	116,805	2.13	249,007.65	5,555	1.9676	10,929.46	122,360	259,937.11
Leggings, canvas, mounted.....	3,312,647	1.00	3,312,647.00	200,000	.90	207,000.00	3,512,647	3,520,647.00
Leggings, canvas, mounted.....	782,122	2.15	1,674,062.30	80,000	2.28	179,400.00	862,122	1,752,462.30
Leggings, sprud, woolen.....	599,000	2.00	1,198,000.00				599,000	1,198,000.00
Moccasins.....	275,000	1.00	275,000.00				275,000	275,000.00
Oil, neat's-foot, plots.....	340,776	.27	92,009.52				340,776	92,009.52
Overcoats (manufacturing).....	3,224,844	1.90	6,120,694.24	75,000	1.74	130,500.00	3,299,844	6,451,194.24
Overcoats (complete).....	145	27.00	3,915.00				145	3,915.00
Overshoes, arctic.....	293,228	2.155	640,708.18	72,000	3.40	244,800.00	365,228	640,708.18
Ponchos.....	99,433	3.55	352,987.15				99,433	352,987.15
Shirts, chambray.....	2,019,089	1.05	2,120,043.45				2,019,089	2,120,043.45
Shirts, flannel (manufacturing).....	2,289,202	1.48	1,008,816.96				2,289,202	1,008,816.96
Shirts, flannel (complete).....	1,234,289	2.57	3,162,408.43				1,234,289	3,162,408.43
Shoes, gymnasium.....	3,550	.80	2,840.00				3,550	2,840.00
Shoes, field.....	7,843,000	4.65	36,469,950.00	480,000	4.86	2,332,800.00	8,323,000	36,469,950.00
Shoes, russet.....	7,152,416	4.65	33,258,936.90				7,152,416	33,258,936.90
Shoe, pace.....	2,453	4.16	10,204.48				2,453	10,204.48
Shocks.....	3,871,900	4.10	15,874,790.00	30,000	3.70	111,000.00	3,901,900	15,985,790.00
Stockings, cotton.....	5,453,759	.13	708,988.67	150,000	.12	18,000.00	5,603,759	726,988.67
Stockings, wool, heavyweight.....	20,294,592	.45	9,132,566.40				20,294,592	9,132,566.40
Stockings, wool, lightweight.....	21,583,683	.31	6,690,541.73	1,000,000	.27	270,000.00	22,583,683	6,960,541.73
Suits blue, denim.....	44,289	2.50	110,722.50				44,289	110,722.50
Suits brown, denim.....	126,700	2.50	316,750.00				126,700	316,750.00
Tags, identification.....	3,576,000	1.60	5,721,600.00				3,576,000	5,721,600.00
Toques.....	195,000	.84	163,800.00				195,000	163,800.00
Trousers, blue, denim.....	739,777	1.26	932,721.26				739,777	932,721.26
Trousers, brown, denim.....	1,059,605	1.25	1,324,506.25				1,059,605	1,324,506.25
Trousers, dress.....	57,008	1.00	57,008.00				57,008	57,008.00
Trousers, duck, white.....	7,285,817	.48	3,497,192.16	200,000	.385	79,000.00	7,485,817	3,576,192.16
Undershirts, cotton.....	174,672	.58	101,309.76				174,672	101,309.76
Undershirts, cotton, ribbed.....	1,305,247	.54	704,833.38				1,305,247	704,833.38
Undershirts, fleece-lined.....	5,936,287	1.50	8,904,430.00				5,936,287	8,904,430.00
Undershirts, wool.....								
Arresters, spark.....	139,862	.21	29,371.02	30,000	.16	4,800.00	169,862	34,171.02
Axes.....	151,764	.755	114,574.27	7,500	.66	4,950.00	159,264	119,524.27
Bags, barrack (manufacturing).....	2,874,817	1.08	3,103,833.36				2,874,817	3,103,833.36
Bags, barrack (complete).....	862,415	.96	819,294.26				862,415	819,294.26
Bags, recruit, clothing (manufacturing).....	2,815	1.80	2,252.00				2,815	2,252.00
Bags, recruit, clothing (complete).....	285,601	1.1375	322,701.36				285,601	322,701.36
Bags, surplus kit (manufacturing).....	1,813	2.80	5,076.40				1,813	5,076.40
Bags, surplus kit (complete).....	12,000	4.50	54,000.00				12,000	54,000.00

Equipment.

Statement showing quantities of clothing and equipage contracted for by the Quartermaster Corps from July 1, 1916, to Oct. 31, 1917, inclusive—Con.

Articles.	Contracts placed from July 1, 1916, to Oct. 31, 1917 (exclusive of Mar. 5 opening).			Contracts placed under opening of bids of Mar. 5, 1917.			Grand total of contracts placed including Mar. 5 opening.		
	Quantity	Average price.	Total cost.	Quantity.	Average price.	Total cost.	Quantity.	Total cost.	
<i>Equipage—Continued.</i>									
Bags, water, sterilizing.....	95,000	3.53	\$333,850.00	50,000	1.53	20,500.00	95,000	\$354,350.00	
Bars, mosquito (manufacturing).....	1,034,143	1.57	590,031.51				1,034,143	590,031.51	
Bars, mosquito (complete).....	88,087	3.30	290,720.10				88,087	290,720.10	
Batons.....	180	7.10	1,278.00				180	1,278.00	
Brassards red.....	12,781	1.17	2,169.37	2,000	.23	460.00	14,781	2,629.37	
Brooms, corn.....	783,722	.60	470,233.20	25,000	.4975	12,437.50	808,722	482,670.70	
Brushes scrubbing.....	204,611	.125	25,576.38				204,611	25,576.38	
Bugles, with slings.....				2,000	4.50	9,000.00	2,000	9,000.00	
Bugles without slings.....									
Cases pillow.....	32,697	3.75	122,613.75				32,697	122,613.75	
Cement, ambroid.....	203,400	.196	39,863.00				203,400	39,863.00	
Chains barrack.....	2,121	.17	360.57				2,121	360.57	
Colors camp, without staff.....	2,486	1.62	4,027.32				2,486	4,027.32	
Colors regimental Infantry silk.....	1,000	1.63	1,630.00				1,000	1,630.00	
Containers, neat's-foot oil.....	250	71.00	17,750.00				250	17,750.00	
Comforters.....	30	555	16,650.00				30	16,650.00	
Cots, canvas.....	602,194	2.50	1,505,485.00				602,194	1,505,485.00	
Cots, steel.....	408,311	3.25	1,327,010.75	170,000	2.80	476,000.00	408,311	1,803,010.75	
Covers, cot.....	47,000	3.67	172,490.00				47,000	172,490.00	
Covers, mattress.....	137,562	.09	12,380.56				137,562	12,380.56	
Desks, field, large.....	139,336	.12	16,722.72				139,336	16,722.72	
Desks, field small.....	9,683	15.85	143,955.55				9,683	143,955.55	
Files, tent, storage.....	51,198	10.00	511,980.00	100	12.90	1,290.00	52,198	523,270.00	
Files, wall, large.....	570	5.45	3,106.50	1,000	11.05	11,050.00	1,570	14,156.50	
Files, wall, small.....	23,580	11.02	245,611.20				23,580	245,611.20	
Globes, lantern, blue.....	42,705	5.47	233,596.35				42,705	233,596.35	
Globes, lantern, green.....	5	.60	3.00				5	3.00	
Globes, lantern, red.....	1,330	.60	798.00				1,330	798.00	
Globes, lantern, white.....	51	.82	41.82				51	41.82	
Guldons, Ambulance.....	3,056	.15	458.40				3,056	458.40	
Guldons, Artillery, service.....	1,000	4.32	4,320.00				1,000	4,320.00	
Guldons, Field Hospital, service.....	800	2.82	2,256.00				800	2,256.00	
Guldons, Signal Corps, service.....	100	4.82	482.00				100	482.00	
Halyards.....	100	3.07	307.00				100	307.00	
Handles, shovel, long.....	2,000	6.99	13,980.00				2,000	13,980.00	
Handles, shovel, short.....	2,000	.20	400.00				2,000	400.00	

ARMY APPROPRIATION BILL, 1919.

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Bandles, spade.	2,000	2,000	430.00	2,000	430.00	2,000	430.00	2,000	430.00
Belts, six.	191,909	191,909	32,624.53	191,909	32,624.53	191,909	32,624.53	191,909	32,624.53
Belts, hatchet.	5,000	5,000	138.00	5,000	138.00	5,000	138.00	5,000	138.00
Belts, pickax.	212,712	212,712	36,161.04	212,712	36,161.04	212,712	36,161.04	212,712	36,161.04
Belts, shoe.	495,013	495,013	599,264.95	495,013	599,264.95	495,013	599,264.95	495,013	599,264.95
Belts, trunk.	25,726	25,726	188,828.84	25,726	188,828.84	25,726	188,828.84	25,726	188,828.84
Belts, trunk.	69,635	69,635	370,458.20	69,635	370,458.20	69,635	370,458.20	69,635	370,458.20
Belts, trunk.	3,000	3,000	450.00	3,000	450.00	3,000	450.00	3,000	450.00
Belts, trunk.	113,996	113,996	76,377.32	113,996	76,377.32	113,996	76,377.32	113,996	76,377.32
Belts, trunk.	34,217	34,217	24,638.24	34,217	24,638.24	34,217	24,638.24	34,217	24,638.24
Belts, trunk.	17,270,000	17,270,000	276,321.28	17,270,000	276,321.28	17,270,000	276,321.28	17,270,000	276,321.28
Belts, trunk.	17,445,700	17,445,700	255,516.95	17,445,700	255,516.95	17,445,700	255,516.95	17,445,700	255,516.95
Belts, trunk.	750,000	750,000	33,215.00	750,000	33,215.00	750,000	33,215.00	750,000	33,215.00
Belts, trunk.	16,950,800	16,950,800	117,660.00	16,950,800	117,660.00	16,950,800	117,660.00	16,950,800	117,660.00
Belts, trunk.	12,532	12,532	4,403.70	12,532	4,403.70	12,532	4,403.70	12,532	4,403.70
Belts, trunk.	76,334	76,334	41,983.70	76,334	41,983.70	76,334	41,983.70	76,334	41,983.70
Belts, trunk.	207,335	207,335	60,132.96	207,335	60,132.96	207,335	60,132.96	207,335	60,132.96
Belts, trunk.	2,156	2,156	10,327.24	2,156	10,327.24	2,156	10,327.24	2,156	10,327.24
Belts, trunk.	4,252	4,252	3,656.72	4,252	3,656.72	4,252	3,656.72	4,252	3,656.72
Belts, trunk.	8,200	8,200	1,886.00	8,200	1,886.00	8,200	1,886.00	8,200	1,886.00
Belts, trunk.	9,793	9,793	8,617.84	9,793	8,617.84	9,793	8,617.84	9,793	8,617.84
Belts, trunk.	13,796	13,796	3,449.00	13,796	3,449.00	13,796	3,449.00	13,796	3,449.00
Belts, trunk.	314,902	314,902	329,072.59	314,902	329,072.59	314,902	329,072.59	314,902	329,072.59
Belts, trunk.	2,617,965	2,617,965	654,491.50	2,617,965	654,491.50	2,617,965	654,491.50	2,617,965	654,491.50
Belts, trunk.	7,103	7,103	28,625.09	7,103	28,625.09	7,103	28,625.09	7,103	28,625.09
Belts, trunk.	13,984	13,984	17,619.84	13,984	17,619.84	13,984	17,619.84	13,984	17,619.84
Belts, trunk.	64,438	64,438	19,973.78	64,438	19,973.78	64,438	19,973.78	64,438	19,973.78
Belts, trunk.	14,053	14,053	20,657.91	14,053	20,657.91	14,053	20,657.91	14,053	20,657.91
Belts, trunk.	27,650	27,650	31,606.12	27,650	31,606.12	27,650	31,606.12	27,650	31,606.12
Belts, trunk.	103,951	103,951	120,583.16	103,951	120,583.16	103,951	120,583.16	103,951	120,583.16
Belts, trunk.	207,602	207,602	93,420.90	207,602	93,420.90	207,602	93,420.90	207,602	93,420.90
Belts, trunk.	29,694	29,694	111,333.75	29,694	111,333.75	29,694	111,333.75	29,694	111,333.75
Belts, trunk.	20,000	20,000	7.00	20,000	7.00	20,000	7.00	20,000	7.00
Belts, trunk.	22,788	22,788	82,036.80	22,788	82,036.80	22,788	82,036.80	22,788	82,036.80
Belts, trunk.	3,311,718	3,311,718	397,406.16	3,311,718	397,406.16	3,311,718	397,406.16	3,311,718	397,406.16
Belts, trunk.	179,775	179,775	126,842.50	179,775	126,842.50	179,775	126,842.50	179,775	126,842.50
Belts, trunk.	25,000	25,000	16,250.00	25,000	16,250.00	25,000	16,250.00	25,000	16,250.00
Belts, trunk.	120,460	120,460	96,368.00	120,460	96,368.00	120,460	96,368.00	120,460	96,368.00
Belts, trunk.	42,247	42,247	13,096.67	42,247	13,096.67	42,247	13,096.67	42,247	13,096.67
Belts, trunk.	9,879	9,879	64,213.60	9,879	64,213.60	9,879	64,213.60	9,879	64,213.60
Belts, trunk.	54,638	54,638	43,710.40	54,638	43,710.40	54,638	43,710.40	54,638	43,710.40
Belts, trunk.	10,000	10,000	22,800.00	10,000	22,800.00	10,000	22,800.00	10,000	22,800.00
Belts, trunk.	2,320	2,320	1,856.00	2,320	1,856.00	2,320	1,856.00	2,320	1,856.00
Belts, trunk.	100	100	262.00	100	262.00	100	262.00	100	262.00
Belts, trunk.	120	120	5,850.00	120	5,850.00	120	5,850.00	120	5,850.00
Belts, trunk.	136	136	6,075.00	136	6,075.00	136	6,075.00	136	6,075.00
Belts, trunk.	20,200	20,200	38,330.00	20,200	38,330.00	20,200	38,330.00	20,200	38,330.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00	1.65	2,366.00
Belts, trunk.	1.65	1.65	2,366.00	1.65	2,366.00	1.65	2,3		

Great growth.

Statement showing quantities of clothing and equipage contracted for by the Quartermaster Corps from July 1, 1916, to Oct. 31, 1917, inclusive—Contd.

Articles.	Contracts placed from July 1, 1916, to Oct. 31, 1917 (exclusive of Mar. 5 opening).			Contracts placed under opening of bids of Mar. 5, 1917.			Grand total of contracts placed including Mar. 5 opening.
	Quantity.	Average price.	Total cost.	Quantity.	Average price.	Total cost.	
Equipage—Continued.							
Sticks, also, shoe.	13,665	\$0.70	\$9,565.20	500	\$0.74	\$370.00	\$9,935.20
Stoves, tent.	180,876	2.60	470,277.60	8,800	1.80	15,840.00	486,117.60
Stovepipe, elbows.	87,978	.17	14,956.26	2,100	.13	273.00	15,229.26
Stovepipe, joints.	1,034,985	.25	258,746.25	10,000	.1825	1,825.00	260,571.25
Stretchers, shoe.	17,898	.40	7,159.20	600	.385	231.00	7,390.20
Tapes, foot measuring.	13,804	.0275	379.61				379.61
Tents.							
Hostel, ward (manufacturing).	500	1.98.00	49,000.00				49,000.00
Pyramidal (manufacturing).	161,849	17.00	2,751,433.00				2,751,433.00
Shelter, halves (manufacturing).	6,980,870	1.45	2,411,166.50				2,411,166.50
Storage (manufacturing).	1,230	29.00	35,870.00	1,230			35,390.00
Wall, large (manufacturing).	2,130	15.00	31,950.00	2,130			31,950.00
Wall, small (manufacturing).	42,525	14.00	595,350.00	42,525			595,350.00
Wall, small (complete).	120	47.97	5,756.40	120			5,756.40
Whistles and chains, Acme.	162,821	.25	40,705.25	10,000	.223	2,220.00	42,925.25
Whistles and chains, Kinglet.	39,980	.21	8,395.80	5,000	.26	1,300.00	9,695.80
Whistles and chains, Siren.	19,010	.375	7,128.75	5,000	.30	1,500.00	8,628.75
Materials.							
Bobbinette, 26 inches.	12,292,499	1.552	1,905,337.35	12,292,499			1,905,337.35
Bobbinette, 52 inches.	404,501	.37	149,667.37	404,501			149,667.37
Bobbinette, 72 inches.	1,892,551	.5175	985,220.55	1,892,551			985,220.55
Buttons, coat, bronze, large.	347,245	1.45	503,505.25	15,200	1.36	20,672.00	524,177.25
Buttons, coat, bronze, small.	634,700	.05	31,735.00	24,150	.79	19,078.50	51,813.50
Buttons, fly, zinc.	9,540	12.125	1,158.38				1,689.38
Buttons, overcoat, bronze.	372,195	2.40	893,268.00	5,500	2.05	11,275.00	904,543.00
Buttons, shirt.	770,980	1.25	963,725.00				948,305.40
Buttons, suspender, zinc.	141,938	.21	29,806.98				80,161.83
Cloth, black, Italian.	73,894	.60	44,336.40				44,336.40
Cloth, facing, olive drab.	28,150	2.52	70,938.00				73,894
Cloth, cotton, olive drab.	18,250,342	3.15	57,488,557.73	2,000,000	.215	430,000.00	58,388.00
Cloth, machine.	4,550	1.81	8,235.50				6,178,357.73
Cotton, shirting.	3,998,365	.20	799,673.00				8,235.50
Denim, blue.	8,458,981	.25	2,114,745.25				799,673.00
Denim, brown.	4,970,000	.37	1,839,900.00				2,114,745.25
							1,839,900.00

ARMY APPROPRIATION BILL, 1919.

111

Drilling unbleached.	do.	19	4,270,266.51	500,000	.15	75,000.00	22,975,029	4,345,366.51
Duck, commercial.	do.	.06	9,918,361.20	500,000	.203	13,150.00	9,966,696	9,918,361.20
Duck, 8-oz.	do.	.22	1,091,272.58				9,551,239	2,004,422.58
Duck, No. 8, 34 inches, olive drab.	do.	.754	5,780.00				7,500	5,780.00
Duck, 1 1/4-oz.	do.	.50	14,209,748.50	2,000,000	.384	798,000.00	30,799,497	15,187,748.50
Duck, No. 8, khaki.	do.	.56	291,424.00				520,400	291,424.00
Duck, No. 4, 42 inches, khaki.	do.	.80	272,024.00	10,200	.768	7,818.20	350,200	279,813.20
Duck, 1/2-oz.	do.	.33	1,650.00				5,000	1,650.00
Ducks, mottled over.	do.	.24	137,088.72				571,203	137,088.72
Ducks, bleached, 6 1/2 ounce.	do.	.08	405,392.00				684,400	405,392.00
Ducks, unbleached, No. 8 3/4 inch.	do.	.27	209,100.00				1,108,000	209,100.00
Ducks, unbleached, 40-inch.	do.	.548	38,619.80				61,350	38,619.80
Ducks, unbleached, No. 8-22 inch.	do.	.39	9,865,391.99	600,000	.31	186,000.00	25,867,671	10,041,391.99
Ducks, sheet-tent.	do.	1.70	38,651,991.30	750,000	1.35	1,012,500.00	20,545,239	34,664,491.30
Flannel shirting	do.	.17	955,565.58	103,049	.15	15,467.35	54,000	971,022.93
Flannel Canton	do.	.230	816,320.80				5,724,023	816,320.80
Jeans, corse	do.	2.75	34,339,565.50	780,000	2.10	1,638,000.00	13,267,122	35,977,565.50
Lining for jerkins	do.	3.40	42,244,065.00	500,000	3.40	1,700,000.00	12,524,725	43,944,065.00
Melton, 10-ounce	do.	.145	42,165.57				290,797	42,165.57
Melton, 30-ounce	do.	.16	856,289.00	200,000	.14	26,000.00	5,551,810	884,289.00
Muslin	do.	.55	2,147,333.66	400,000	.578	231,200.00	4,304,243	2,378,533.66
Padding, curvas	do.	.22	759,747.12	500,000	.19	95,000.00	2,953,906	854,747.12
Serge, lustur, wool, light.	do.	.49	1,216,768.00				2,483,200	1,216,768.00
Silents	do.	.209	102,993.67	12,100	.299	3,617.90	356,226	106,611.57
Soles, half.	do.	.21	19,494.93	6,000	.169	1,014.00	98,553	20,508.93
Tents, plates, and chains.	do.	33.00M	438,998.01	350,000	53.00M	15,650.00	13,652,061	457,648.01
Tents, shields.	do.	28.00M	111,566.61	100,000	27.70M	2,770.00	4,084,458	114,336.61
Tents, slips No. 2.	do.	.5375	202,412.29	12,100	.499	6,087.90	388,681	208,499.19
Tents, slips No. 3.	do.	.27	1,167,963.82				4,325,896	1,167,963.82
Tents, square.	do.	.18	561,398.40				3,118,880	561,398.40
Twill.	do.							
Lifts, top.	do.							

* Price shown is for manufacture only; materials are furnished by the Quartermaster Corps.

* Great gross.

Appropriation fiscal year 1918.....	\$610, 178, 548. 64
Estimate fiscal year 1919.....	1, 076, 723, 943. 04
Increase	466, 545, 394. 40

Clothing and camp and garrison equipage, fiscal year 1919.

Deficiency act June 15, 1917.....	\$231, 538, 548. 64
Deficiency act Oct. 6, 1917.....	350, 000, 000. 00
	581, 538, 548. 64

Statement showing estimated amount required for the fiscal year 1919.

Item No.	Item.	Original estimate for fiscal year 1919.	Final estimate (as per details).
C. & E. 249	Cloth.....	\$287, 823, 306. 94	\$254, 837, 580. 04
C. & E. 250	Woolens.....		
C. & E. 251	Materials.....		
C. & E. 252	Clothing:	73, 472, 948. 49	74, 547, 578. 31
	(a) Manufacture of, by the Quartermaster Corps.....	49, 467, 433. 55	26, 432, 688. 86
	(b) Manufacture of, by contractors.....	36, 529, 817. 56	24, 972, 290. 68
	(c) Purchase of, from contractors.....	254, 977, 164. 20	363, 311, 606. 55
C. & E. 253	Clothing not drawn, due enlisted men.....	0. 00	0. 00
C. & E. 254	Altering.....	761, 037. 44	47, 388, 585. 50
C. & E. 255	Fitting.....	761, 037. 44	761, 037. 44
C. & E. 256	Washing.....	1, 522, 074. 85	16, 735, 773. 50
C. & E. 257	Cleaning.....	761, 037. 44	761, 037. 44
C. & E. 258	Equipage:		
	(a) Manufacture of, by Quartermaster Corps.....	47, 349, 682. 82	184, 651, 074. 24
	(b) Purchase of, from contractors.....	105, 915, 549. 13	57, 853, 411. 99
C. & E. 259	Toilet articles.....	1, 522, 074. 86	1, 522, 074. 86
C. & E. 260	Barbers' materials.....	761, 037. 44	761, 037. 44
C. & E. 261	Toilet materials.....	761, 037. 44	761, 037. 44
C. & E. 262	Toilet kits.....	4, 566, 421. 57	4, 566, 421. 57
C. & E. 263	Housewives.....	761, 037. 44	761, 037. 44
C. & E. 264	Packing.....	9, 893, 489. 57	9, 893, 489. 57
C. & E. 265	Handling.....	0. 00	0. 00
C. & E. 266	Similar necessities.....	761, 037. 44	1, 401, 257. 44
C. & E. 266a	Civilian employees.....	2, 612, 500. 00	2, 612, 500. 00
C. & E. 267	Citizens' clothing.....	2, 192, 422. 73	2, 192, 422. 73
C. & E. 268	Indemnity.....	0. 00	0. 00
	Total.....	883, 172, 148. 36	1, 076, 723, 943. 04

Estimate for fiscal year 1919, appropriation "Clothing and camp and garrison equipage," required in the United States and Philippine Islands.
Statements, by items, of the analysis of the appropriation for which the sum estimated for the fiscal year 1919 is required.

Item No.	Item.	Current requirements.			Reserve stock—supplies.	Grand total.
		Supplies.	Services.	Total.		
C. & E. 249	Cloth.....	3104, 865, 873. 00		3104, 865, 873. 00	353, 171, 706. 86	3454, 837, 580. 04
C. & E. 250	Woolens.....					
C. & E. 251	Materials.....	59, 638, 062. 70		59, 638, 062. 70	314, 909, 515. 61	74, 547, 578. 31
C. & E. 252	Clothing.....					
	(a) Manufacture of, by the Quartermaster Corps.....		226, 432, 683. 80	226, 432, 683. 80		226, 432, 683. 80
	(b) Manufacture of, by contractors.....		24, 972, 290. 68	24, 972, 290. 68		24, 972, 290. 68
	(c) Purchase of, from contractors.....	311, 451, 398. 82		311, 451, 398. 82	51, 880, 210. 73	363, 311, 009. 56
C. & E. 253	Clothing not drawn, the enlisted men on discharge.....					
C. & E. 254	Alterings.....		47, 388, 585. 50	47, 388, 585. 50		47, 388, 585. 50
C. & E. 255	Fitting.....		761, 037. 44	761, 037. 44		761, 037. 44
C. & E. 256	Washing.....		16, 735, 773. 50	16, 735, 773. 50		16, 735, 773. 50
C. & E. 257	Cleaning.....		761, 037. 44	761, 037. 44		761, 037. 44
C. & E. 258	Equipage.....					
	(a) Manufacture of, by Quartermaster Corps.....	113, 114, 844. 53	15, 978, 807. 43	129, 093, 651. 97	55, 557, 432. 27	184, 651, 074. 24
	(b) Purchase of, from contractors.....	36, 651, 749. 82		36, 651, 749. 82	21, 201, 862. 17	57, 853, 411. 99
C. & E. 259	Toilet articles.....	1, 522, 074. 86		1, 522, 074. 86		1, 522, 074. 86
C. & E. 260	Barbers' materials.....	761, 037. 44		761, 037. 44		761, 037. 44
C. & E. 261	Tailors' materials.....	761, 037. 44		761, 037. 44		761, 037. 44
C. & E. 262	Toilet kits.....	4, 566, 421. 57		4, 566, 421. 57		4, 566, 421. 57
C. & E. 263	Housewives.....	761, 037. 44		761, 037. 44		761, 037. 44
C. & E. 264	Packing.....	9, 893, 489. 57		9, 893, 489. 57		9, 893, 489. 57
C. & E. 265	Handling.....					
C. & E. 266	Similar necessities.....	1, 401, 257. 44		1, 401, 257. 44		1, 401, 257. 44
C. & E. 266a	Civilian employees.....	2, 612, 500. 00		2, 612, 500. 00		2, 612, 500. 00
C. & E. 267	Citizens' outer clothing.....	2, 192, 422. 73		2, 192, 422. 73		2, 192, 422. 73
C. & E. 268	Indemnity.....					
	Total.....	739, 380, 704. 44	135, 642, 720. 87	875, 023, 425. 31	201, 700, 517. 73	1, 076, 723, 943. 04

Items C. & E. 249 and 250.—Cloth and woollens required in the manufacture of clothing by contractors and by the Quartermaster Corps.

Materials.	Unit price.	Regular Army.		Reserve stock.		Total.	
		Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.
Cloth, cotton, O. D.....yards..	\$0.315	26,104,053	\$8,220,177.04	7,726,780	\$2,433,935.70	33,880,833	\$10,654,112.74
Flannel shirting.....do....	1.70	19,532,232	33,204,794.40	5,771,541	9,811,619.70	25,303,773	43,016,414.10
Melton, O. D., 16-ounce.....do....	2.75	34,271,992	94,332,900.75	10,144,510	27,897,375.00	44,416,502	122,230,275.75
Melton, O. D., 30-ounce.....do....	3.40	15,819,500	53,784,600.00	4,682,572	15,920,744.80	20,502,072	69,705,344.80
Serge, luster, wool.....do....	.55	12,951,638	7,123,400.00	3,832,785	2,108,031.75	16,784,423	9,231,432.65
Total.....		.....	196,665,873.09	.....	58,171,706.95	.....	254,837,580.04

Item C. & E.—Materials required in the manufacture of clothing.

Materials.	Unit price.	Regular Army.		Reserve stock.		Total.	
		Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.
Buttons, coat, bronze, large.....gross..	\$1.45	62,337,100	\$902,371.00	15,594,275	\$155,842.75	77,921,375	\$779,213.75
Buttons, coat, bronze, small.....do....	.95	101,864,520	659,449.38	25,466,130	164,862.34	127,330,650	824,311.72
Buttons, overcoat, bronze, small.....do....	2.40	53,400,000	854,400.00	13,350,000	213,600.00	66,750,000	1,068,000.00
Cloth, facing.....yard..	2.52	131,134	430,248.79	32,783	107,562.19	163,917	537,810.10
Denim, blue.....do....	.25	62,626,144	15,651,954.63	16,656,536	3,882,988.65	78,282,680	19,414,943.28
Drilling, unbleached.....do....	.19	7,117,686	1,349,514.90	1,779,396	337,378.72	8,896,981	1,686,893.62
Duck, white, No. 8.....do....	.548	603,551	377,210.94	165,888	94,302.73	829,439	471,513.67
Duck, bleached, 6½-7 ounces.....do....	.24	1,533,419	317,242.43	395,855	79,310.61	1,979,274	396,553.04
Duck, shelter, tent.....do....	.39	1,583,340	608,000.00	395,835	152,000.00	1,797,175	760,000.00
Jeans, corset.....do....	.17	3,975,251	699,361.10	998,313	174,840.27	4,968,564	874,201.37
Padding, canvas.....do....	.16	14,842,051	2,374,293.80	3,710,513	593,573.45	18,552,564	2,967,867.25
Leather, jerkin.....square feet..	.36	25,725,000	8,709,650.00	6,181,250	2,177,412.50	30,906,250	10,887,062.50
Slacks, O. D.....yards..	.23	12,160,395	2,665,799.60	3,040,099	666,449.90	15,200,494	3,332,249.50
Webbing, O. D., 1 inch.....do....	.19	6,967,962	1,331,243.80	1,741,990	332,810.95	8,709,952	1,664,054.75
Trimnings.....do....		.....	26,106,322.33	.....	5,776,580.55	.....	28,882,902.88
Total.....		.....	59,688,062.70	.....	14,909,515.61	.....	74,547,578.31

Item C. & E. 252.—Clothing (consolidated).

252. Clothing:	
252a. Manufacture of, by Quartermaster Corps-----	\$26, 432, 688. 86
252b. Manufacture of, by contractors-----	24, 972, 290. 68
252c. Purchase of, from contractors-----	311, 451, 395. 82
Total -----	362, 856, 385. 36

For details see items 252a, 252b, and 252c.

Item 252a.—Clothing, the manufacture of, by the Quartermaster Corps, for issue and sale at cost price, according to Army Regulations.

Articles.	Unit cost.	Regular Army.	
		Quantity.	Cost.
Aprons, bakers' and butchers'	\$0. 06	34, 931	\$2, 095. 86
Aprons, cooks' .....	. 02	57, 057	1, 141. 14
Belts, waist .....	. 01	5, 701, 060	57, 010. 60
Breeches, cotton .....	. 507	1, 211, 250	614, 103. 75
Breeches, wool .....	. 659	6, 108, 210	4, 025, 310. 39
Caps, bakers' and cooks' .....	. 16	579, 215	92, 674. 40
Caps, winter, O. D. ....	. 10	3, 800, 000	380, 000. 00
Chevrons, cotton, O. D. ....	. 235	548, 704	128, 955. 44
Chevrons, wool, O. D. ....	. 328	5, 730, 729	1, 879, 679. 01
Coats, denim .....	. 32	7, 936, 735	2, 539, 755. 20
Coats, cotton, O. D. ....	. 487	748, 125	364, 286. 88
Coats, white, white duck .....	. 25	117, 572	29, 393. 00
Coats, woolen, O. D.	1. 649	4, 625, 585	7, 627, 589. 66
Jerkins .....	. 80	1, 075, 000	860, 000. 00
Overalls, brown, denim .....	. 355	95, 586, 735	3, 403, 290. 93
Shirts, flannel .....	. 404	10, 851, 240	4, 383, 900. 96
Trousers, white duck .....	. 37	117, 572	43, 501. 64
Total			26, 432, 688. 86

ITEM 252-b.—Clothing, the manufacture of, by contractors, from materials furnished by the Quartermaster Corps, for issue and sale according to Army Regulations.

Articles.		Regular Army.	
		Quantity.	Cost.
Breeches, cotton, O. D.	\$0. 507	1, 211, 500	\$614, 103. 75
Breeches, wool, O. D. ....	. 659	6, 108, 210	4, 025, 310. 39
Caps, service .....	. 40	2, 000, 000	800, 000. 00
Coats, cotton, O. D. ....	. 487	748, 125	364, 286. 87
Coats, wool, O. D.	1. 649	4, 625, 585	7, 627, 589. 67
Hats, blue, denim .....	. 20	5, 000	1, 000. 00
Jerkins .....	. 80	1, 075, 000	860, 000. 00
Overcoats, wool, O. D.	2. 00	5, 340, 000	10, 680, 000. 00
Total			24, 972, 290. 68

Item C. & E. 252c.—Clothing, purchase of, from contractors, for issue to the Army and sale at cost price, according to Army regulations.

Articles.	Unit cost.	Regular Army.		Reserve.		Total.	
		Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.
Blankets.....	\$6.25	8,737,000	\$54,806,250.00	1,462,574	\$9,141,076.50	10,199,574	\$63,747,326.50
Boots, rubber, half hip.....	4.46	3,200,000	14,272,000.00	538,680	2,402,512.80	3,738,680	16,674,512.80
Cords, hat.....	.07	8,210,000	574,700.00	1,374,354	96,204.78	9,584,354	670,904.78
Drawers, summer.....	.49	10,350,000	5,071,500.00	1,732,890	859,116.10	12,082,890	5,930,616.10
Drawers, winter.....	1.50	23,836,880	35,755,320.00	3,990,434	5,985,651.00	27,827,314	41,740,971.00
Gantlets, winter.....	3.00	2,550,000	7,650,000.00	426,870	1,280,610.00	2,976,870	8,930,610.00
Gloves, yellow horse hide.....	1.26	716,680	902,991.60	120,969	152,421.94	837,629	1,055,413.54
Gloves, riding.....	2.10	4,420,080	9,282,768.00	739,972	1,553,941.20	5,160,352	10,836,739.20
Gloves, wool O. D.....	.64	6,879,080	4,402,588.40	1,151,555	738,085.20	8,030,615	5,139,593.60
Hats, service.....	1.65	5,572,540	9,194,691.00	932,843	1,139,190.95	6,505,383	10,333,881.95
Laces, field shoes.....	2.125	13,584,240	200,461.88	2,277,002	33,602.63	15,861,242	234,064.51
Laces, marching shoes.....	2.125	4,560,000	67,282.00	763,346	11,264.63	5,323,346	78,546.63
Leggins, canvas, foot.....	1.00	7,864,780	7,864,780.00	1,316,564	1,316,564.00	9,181,344	9,181,344.00
Leggins, canvas, mounted.....	2.15	1,060,000	2,279,000.00	177,444	381,504.60	1,234,444	2,660,504.60
Moccasins.....	1.00	12,000,000	12,000,000.00	2,008,800	2,208,800.00	14,008,800	14,208,800.00
Oil, neat's-foot.....	.27	4,389,700	1,185,219.00	736,136	198,485.72	5,124,836	1,383,704.72
Ornaments.....			750,000.00				750,000.00
Overshoes, arctic.....	2.185	1,800,000	3,933,000.00	301,320	658,384.20	2,100,320	4,591,384.20
Shoes, marching.....	4.65	2,280,000	10,602,000.00	381,672	1,774,774.80	2,661,672	12,376,774.80
Shoes, field.....	4.65	13,559,600	63,052,140.00	2,272,877	10,578,877.95	15,832,477	73,631,017.95
Slickers.....	4.10	5,422,650	22,232,865.00	907,752	3,721,783.20	6,330,402	25,954,648.20
Stockings, cotton.....	.13	2,731,440	355,087.20	457,274	59,444.62	3,188,714	414,531.82
Stockings, wool, heavy weight.....	.45	17,889,680	8,050,356.00	2,994,732	1,347,629.40	20,884,412	9,397,985.40
Stockings, wool, light weight.....	.31	18,118,510	5,616,738.10	3,033,039	940,242.09	21,151,549	6,556,980.19
Tags, identification.....	6.90	5,676,470	39,167.64	950,241	6,556.66	6,626,711	45,724.30
Toques.....	.84	3,000,000	2,520,000.00	505,200	424,368.00	3,505,200	2,944,368.00
Undershirts, cotton.....	.48	3,220,500	1,545,840.00	542,012	260,165.76	3,762,512	1,806,005.76
Undershirts, winter.....	1.50	18,279,740	27,419,610.00	3,060,028	4,590,042.00	21,339,768	32,009,652.00
Alaskan clothing.....			25,000.00				25,000.00
Total.....			311,451,395.82		51,860,210.73		363,311,606.55

Item C. & E. 253.—For payment for clothing not drawn, due to enlisted men on discharge.

The clothing money allowance to enlisted men was abolished by War Department General Orders No. 89, July 11, 1917.

Item C. & E. 254.—Altering clothing, when necessary.

Funds estimated as required during the fiscal year ending June 30, 1919, to pay for altering and dyeing prisoners' clothing and repair of clothing, including shoes-----	\$47, 388, 585 .50
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Item C. & E. 255.—Fitting clothing, when necessary.

Funds estimated as required during the fiscal year ending June 30, 1919, to pay for manufacturing clothing according to special measure-----	761, 037. 44
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Item C. & E. 256.—Washing clothing and equipage, when necessary.

Funds estimated as required during the fiscal year ending June 30, 1919, for washing of clothing and equipage, when necessary-----	16, 735, 773. 50
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Item C. & E. 257.—Cleaning clothing and equipage, when necessary.

Funds estimated as required during the fiscal year ending June 30, 1919, for cleaning clothing and equipage used by prisoners in confinement at posts-----	761, 037. 44
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Item C. & E. 258.—Equipage (consolidated).

258. Equipage:

258a. Manufacture of, by the Quartermaster Corps-----	184, 651, 074. 24
258b. Purchase of, from contractors-----	57, 853, 411. 99

Total-----	242, 504, 486. 23
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For details, see items 258a and 258b.

Item C. & E. 258a.—Equipage, manufacture of, by the Quartermaster Corps.
MATERIAL AND SUPPLIES.

Articles.	Unit cost.	Regular Army.		Reserve Stock.		Total.	
		Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.
Denim.....	\$0.25	927,897	\$131,841.61	463,948	\$65,920.81	1,391,845	\$197,762.42
Drilling, unbleached.....	.19	34,843,105	6,638,677.58	17,421,553	3,319,338.79	52,264,658	9,958,016.37
Duck:							
Khaki, 12.4 ounce.....	.50	66,629,826	34,839,939.50	33,314,913	17,419,969.75	99,944,739	52,259,909.25
Khaki, 8-ounce.....	.22	19,557,953	7,524,023.16	9,778,977	3,762,011.58	29,336,930	11,286,034.74
Khaki, No. 4.....	.80	584,359	467,490.00	292,180	233,745.00	876,539	501,235.00
Shelter tent.....	.29	17,353,067	6,767,696.00	8,676,534	2,383,848.00	26,029,601	9,151,544.03
White No. 8.....	.548	11,948	6,595.84	5,994	3,284.92	17,942	9,854.75
Unbleached 40-inch.....	.68	8,437,500	5,737,500.00	4,218,750	2,898,750.00	12,656,250	8,606,250.07
Tent plates and chains.....	.299	507,004	151,607.70	253,502	75,803.85	760,506	227,411.50
Tent slips, No. 2.....	.033	17,634,650	654,877.18	8,817,325	277,438.59	26,451,975	832,315.70
Tent slips, No. 3.....	.035	4,169,050	105,377.55	2,084,525	52,688.78	6,253,575	158,066.30
Tent squares, G. I.....	.538	493,500	265,503.00	246,750	132,751.50	740,250	408,254.53
Trimnings.....			49,923,741.40		24,961,870.70		74,885,612.10
Total.....			113,114,844.52		55,557,422.27		168,672,266.79

SERVICES.

Bags:							
Barrack.....	\$0.08	397,670	\$31,813.60				
Recruit clothing.....	.402	219,583	88,272.36				
Surplus kit.....	.875	311,680	272,702.50				
Bed sacks.....	.12	5,688,500	682,620.00				
Covers, cot.....	.09	3,375,000	303,750.00				
Flies, tent:							
Hospital, tropical.....	1.28	2,085	2,668.80				
Storage.....	4.45	66,326	295,150.70				
Wall, large.....	5.50	28,050	154,275.00				
Wall, small.....	2.00	109,650	219,300.00				
Tents:							
Hospital, tropical.....	37.50	2,085	78,187.50				
Hospital, ward.....	98.00	3,376	330,848.00				
Pyramidal.....	17.00	493,500	8,399,500.00				
Shelter halves.....	.45	3,253,700	1,464,165.00				
Storage.....	29.00	66,326	1,923,454.00				
Wall, large.....	15.00	13,800	207,000.00				
Wall, small.....	14.00	109,650	1,535,100.00				
Total.....			15,978,807.45		\$55,557,422.27		\$168,672,266.79
Materials.....			113,114,844.52				
Grand total.....			129,093,651.97		55,557,422.27		184,651,074.24

Item C. & C. 258-b.—Equipage, purchase of, from contractors.

Articles.	Unit cost.	Regular Army.		Reserve stock.		Total	
		Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.
Axes and helves.....	\$0.925	231,000	\$216,450.00	135,252	\$125,108.10	366,252	\$341,558.10
Bags, water, sterilizing.....	3.83	89,084	341,191.72	51,491	197,210.53	140,575	538,402.25
Bars, mosquito, single.....	3.75	3,375,000	12,630,250.00	1,950,750	7,315,312.50	5,325,750	19,971,562.50
Batons.....	7.10	48,189	342,078.00	27,818	197,720.80	78,025	539,798.80
Brassards, red.....	.17	85,688	14,566.96	49,528	8,419.76	135,215	22,986.72
Brassards, b'ue.....	.17	30,675	5,214.75	17,730	3,014.10	47,805	8,228.85
Brassards, mounted messenger.....	.07	72,413	5,068.91	41,855	2,930.85	114,268	7,999.76
Brassards, newspaper correspondent.....	.07	72,413	5,068.91	41,855	2,930.85	114,268	7,999.76
Brooms, corn.....	.60	346,850	208,110.00	229,379	137,627.40	626,229	375,737.40
Brushes, scrubbing.....	.125	289,500	35,062.50	162,129	20,266.13	442,626	55,328.63
Bug es, with s'ings.....	4.50	48,530	226,385.00	28,050	126,225.00	76,580	352,610.00
Cement, ambroid, cunces.....	.17	333,018	56,226.66	192,531	32,729.27	525,629	89,355.93
Containers, neat's-foot oil.....	.565	118	66.67	68	38.42	186	105.09
Cots.....	3.25	3,375,000	10,968,750.00	1,950,750	6,339,937.50	6,325,750	17,308,687.50
Desks, field, large.....	15.85	7,794	123,734.90	4,505	71,404.25	12,299	195,139.15
Desks, field, small.....	10.00	48,804	488,610.00	28,243	282,430.00	77,107	771,070.00
Helves, pickaxes.....	.17	352,000	58,840.00	203,456	34,587.52	555,456	94,427.52
Hypochloride of lime, tubes.....	.04	56,000,000	2,240,000.00	32,398,000	1,294,720.00	88,398,000	3,534,720.00
Pickaxes.....	.84	211,210	202,616.40	139,419	113,511.96	350,629	316,128.36
Pins, tent, large.....	.016	19,701,688	315,226.69	11,887,564	182,191.02	31,089,232	497,417.71
Pins, tent, small.....	.0135	18,768,088	253,389.32	10,817,904	146,446.70	29,616,002	399,816.02
Pins, tent, shelter.....	.006	16,268,500	97,611.00	9,403,193	56,419.16	25,671,693	154,030.16
Poles, tent.....	11.36	2,085	23,685.60	1,205	13,688.80	3,290	37,374.40
Hospital, tropical, sets.....	4.52	3,376	15,259.52	1,951	8,818.52	5,327	24,078.04
Hospital, ward, sets.....	1.05	493,500	518,175.00	285,213	299,507.15	778,713	817,682.15
Pyramidal, ward, sets.....	.25	3,253,700	813,425.00	1,980,639	495,159.75	5,234,339	1,308,584.75
Shelter.....	15.83	96,326	1,049,910.58	38,336	606,858.88	104,662	1,656,769.46
Storage, sets.....	4.09	13,800	56,412.00	7,976	32,611.84	21,776	89,053.84
Wall, large, sets.....	2.77	102,000	303,730.50	63,378	175,556.06	173,028	479,287.56
Wall, small, sets.....	3.75	68,250	255,937.50	39,449	147,933.75	107,699	403,871.25
Pouches, musi.....	.80	221,830	177,461.00	128,218	102,574.40	350,021	280,038.40
Shovels.....	6.59	9,117	59,260.50	5,270	34,255.00	14,387	93,515.50
Slings, color, O. D.....	.80	56,500	40,416.00	29,200	23,360.00	79,720	63,776.00
Spades.....	1.65	64,890	106,969.50	37,472	61,828.80	103,302	168,798.30
Stands, musi.....	.70	21,210	16,917.00	13,993	9,795.10	38,203	26,742.10
Sticks, shoe, size.....	.21	91,500	19,215.00	52,887	11,106.27	144,387	30,321.27
Shie ds, tent, G. I.....	2.00	335,980	873,518.00	194,196	504,902.60	530,146	1,378,457.60
Stovepipe, e bows.....	.17	153,000	26,010.00	88,434	15,033.78	241,434	41,043.78
Stovepipe joints.....	.25	1,563,600	390,900.00	903,761	225,940.25	2,467,361	616,840.25
Spark arresters.....	.21	351,000	73,710.00	202,878	42,604.38	553,878	116,281.20

Item C. & C. 258-b.—Equipage, purchase of, from contractors—Continued.

Articles.	Unit cost.	Regular Army.		Reserve stock.		Total	
		Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.
Stretcher, shoe.....	\$0.40	24,210	\$9,684.00	13,993	\$5,597.25	38,203	\$15,281.20
Tape, foot measure.....	.0275	24,210	665.78	13,993	384.81	38,203	1,050.59
Whistles and chains:							
Acme.....	.20	221,556	44,311.20	128,059	25,611.80	349,615	69,923.00
Kinglef.....	.23	41,600	9,568.00	24,045	5,529.35	65,645	15,097.35
Siren.....	.39	37,325	14,556.75	21,574	8,413.86	58,899	22,970.61
Instruments, band, sets.....	2,000.00	1,280	2,560,000.00	740	1,480,000.00	2,020	4,040,000.00
Flags, colors, etc.....			250,000.00		144,500.00		394,500.00
Repair parts for equipage.....			50,000.00		28,900.00		78,900.00
Total.....			36,651,749.82		21,201,662.17		57,853,411.99

Item C. & E. 259.—Toilet articles.

For use of general prisoners confined at military posts and at disciplinary barracks, without pay or allowances, and applicants for enlistment while held under observation ----- \$1,522,074.86

Item C. & E. 260.—Barbers' materials.

For use of general prisoners confined at military posts and disciplinary barracks, without pay or allowances, and applicants for enlistment while held under observation----- 761,037.44

Item C. & E. 261.—Tailors' materials.

For use of general prisoners confined at military posts and disciplinary barracks, without pay or allowances----- 761,037.44

Item C. & E. 262.—Toilet kits: Issue of, to all enlisted men upon entering the service.

Authorized gratuitous issues of, to all enlisted men upon first entering the service, under the provisions of paragraph 1217, Army Regulations, as amended----- 4,566,421.57

Item C. & E. 263.—Housewives: For issue to the Army when necessary.

Authorized issues of one housewife annually to a squad when the necessity for the issue is certified by the commanding officer for service in the field, in accordance with the provisions of paragraph 1215, Army Regulations----- 761,037.44

Item C. & E. 264.—Packing, expenses of.

For the purchase of packing boxes, lumber, wrapping paper, etc----- 9,893,489.57

The funds estimated for will be required during the fiscal year ending June 30, 1919, for the purchase of packing boxes, lumber, excelsior, twine, wrapping paper, etc., at the various depots of the Quartermaster Corps.

Item C. & E. 265.—Handling, expenses of.

No estimate fiscal year 1919.

Item C. & E. 266.—Similar necessaries, expenses of.

For the purchase of, and repairs to, machinery at depots and posts, in connection with the manufacture and repair of clothing and equipage----- 1,401,257.44

The funds estimated for will be required during the fiscal year ending June 30, 1919, for the purchase of and repairs of machinery (sewing and repair machines, etc.) at depots, posts, and cantonments, and similar necessities connected with the manufacture and repair of clothing and equipage.

Item C. & E. 266a.

Employees, hire of ----- 2,612,500.00

For list of employees, see Book of Estimates, 1919. These men are employed in inspecting, packing, handling, and shipping clothing and equipage supplies at the general purchasing and manufacturing depots of the Quartermaster Corps.

Item C. & E. 267.

Citizens' outer clothing----- 2,192,422.73

Funds estimated as required for the purchase of citizens' outer clothing, at a cost of not to exceed \$10 per suit, for issue upon release from confinement to each prisoner who has been confined under a court-martial sentence involving a dishonorable discharge.

Item C. & E. 268.—Indemnity.

To officers and men of the Army, for clothing and bedding, etc., destroyed since April 22, 1898, by order of medical officers of the Army for sanitary reasons, no estimate for fiscal year 1919.

2. The decrease in the amount estimated for in item 258a (equipage purchased from contractors) and the increase in item 252c (clothing purchased from contractors) is partly attributed to the item blankets involving approximately \$63,000,000, which was transferred from equipage to clothing.

3. Jerkins, moccasins, and toques are now being furnished for use of troops abroad and which articles were not heretofore prescribed. Gen. Pershing has also called for large allowances of rubber boots, arctic overshoes, service and winter caps, winter gauntlets, heavy wool stockings, and many other articles of clothing and equipage for which provision must be made.

4. Increased prices since tentative estimate was submitted have also tended to increase the detailed requirements.

5. Item 254 (altering clothing) has been increased to provide for the altering and repairing of all service clothing in the hands of troops.

6. Item 256 (washing clothing and equipage) has been increased to provide for the renovation of all clothing in the hands of troops.

7. Item 266 (similar necessities) has been increased to provide for the purchase and repair of machinery to be provided at posts, cantonments, and other organizations for the repair of clothing, including shoes.

8. In regard to estimate for reserve stock of materials no provision for reserve under item 258a (manufacture of equipage by Quartermaster Corps), which includes the materials required for manufacture of equipage, principally tentage, was made in the original estimate and has been included in the details.

9. On account of the increased prices of materials the full quantity estimated for as reserve can not now be procured with the amount of money included for that purpose.

10. Statements showing purchases and issues of C. & E. supplies will be submitted at an early date.

Supplemental estimate for fiscal year 1919, appropriation "Clothing and camp and garrison equipage" required for 1,387,755 men, in addition to original estimate for 1,612,245 men.

Original estimate.....	\$883,172,148.36
Supplemental estimate.....	949,342,872.27

Item No.	Item.	Additional estimate for fiscal year 1919.
C. & E. 249	Cloth.....	\$299,677,490.99
C. & E. 250	Woolens.....	
C. & E. 251	Materials.....	
C. & E. 252	Clothing:	74,721,578.62
	(a) Manufacture of, by Quartermaster Corps.....	44,205,898.41
	(b) Manufacture of, by contractors.....	26,706,876.48
	(c) Purchase of.....	405,160,689.10
C. & E. 253	Clothing not drawn, due enlisted men on discharge.....	
C. & E. 254	Clothing.....	
C. & E. 255	Fitting.....	
C. & E. 256	Washing.....	
C. & E. 257	Cleaning.....	
C. & E. 258	Equipage:	
	(a) Manufacture of, by Quartermaster Corps.....	78,843,086.88
	(b) Purchase of, from contractors.....	20,027,251.79
C. & E. 259	Toilet articles.....	
C. & E. 260	Barbers' materials.....	
C. & E. 261	Tailors' materials.....	
C. & E. 262	Toilet kits.....	
C. & E. 263	Housewives.....	
C. & E. 264	Packing.....	
C. & E. 265	Handling.....	
C. & E. 266	Similar necessities.....	
C. & E. 266a	Civilian employees.....	
C. & E. 267	Citizens' outer clothing.....	
C. & E. 268	Indemnity.....	
	Total.....	949,342,872.27

Cloth and woolsens—Items 249 and 250.

18,875.340 pairs breeches, wool:	
25,167,120 yards melton, 16-ounce, at \$2.75-----	\$69, 209, 580. 00
7,600.000 caps, winter:	
1,900,000 yard melton, 16-ounce, at \$2.75-----	5, 225, 000. 00
10,363.265 coats, denim:	
37,307,754 yards denim, at \$0.25-----	9, 326, 938. 50
13,663,265 overalls:	
47,821,428 yards denim, at \$0.25-----	11, 955, 357. 00
7,260.000 overcoats:	
18,876,000 yards melton, 30-ounce, at \$3.40-----	64, 178, 400. 00
18,876,000 yards cloth, cotton, at \$0.315-----	5, 945, 940. 00
15,723.590 coats, service:	
28,302,462 yards melton, 16-ounce, at \$2.75-----	77, 831, 770. 50
14,007,480 shirts:	
25,213,464 yards flannel, O. D., at \$1.70-----	42, 862, 888. 80
4,300.000 jerkins:	
3,870,000 yards melton, 30-ounce, at \$3.40-----	13, 158, 000. 00
Total-----	299, 693, 874. 80

Item 251.

18,875.340 breeches, wool:	
2,621.575 yards Silesia, at \$0.22-----	\$576, 746. 50
9,438,670 yards drilling, unbleached, at \$0.19-----	1, 793, 347. 30
18,875,340 trimmings, etc., at \$0.19-----	3, 586, 314. 60
7,600.000 caps, winter:	
1,477,778 yards padding, canvas, at \$0.16-----	236, 444. 48
3,166.666 yards duck, shelter, at \$0.39-----	1, 234, 999. 74
7,600.000 trimmings, at \$0.102-----	775, 200. 00
10,363.265 coats, denim:	
10,363,265 trimmings, at \$0.03-----	310, 897. 95
13,663.265 overalls, denim:	
13,663,265 trimmings, at \$0.02-----	273, 265. 30
7,260.000 overcoats:	
8,167,500 yards padding, canvas, at \$0.16-----	1, 306, 800. 00
1,210,000 yards Silesia, at \$0.22-----	266, 200. 00
72,600,000 buttons, overcoat, at \$2.40 gross-----	1, 210, 000. 00
50,820,000 buttons, coat, at \$0.95 gross-----	335, 270. 83
7,260,000 trimmings, at \$3-----	21, 780, 000. 00
15,723.590 coats, service:	
22,013,026 yards serge, luster wool, at \$0.55-----	12, 107, 164. 30
15,723.590 yards Silesia, at \$0.22-----	3, 459, 189. 80
918,165.693 yards duck, at \$0.548-----	503, 154. 88
78,617,950 buttons, large, at \$1.45 gross-----	791, 638. 73
94,341,540 buttons, small, at \$0.95 gross-----	622, 391. 84
13,758,143 yards padding, at \$0.16-----	2, 201, 302. 88
15,723.590 trimmings, at \$0.10-----	1, 572, 359. 00
14,007,480 shirts:	
4,669,160 yards corset jean, at \$0.17-----	793, 757. 20
14,007,480 trimmings, at \$0.10-----	1, 400, 748. 00
4,300.000 jerkins:	
49,450,000 square feet leather, at \$0.35226-----	17, 419, 300. 00
17,200,000 buttons, coat, at \$1.45 gross-----	173, 194. 37
4,300,000 trimmings, at \$0.023-----	98, 900. 00
Total-----	74, 828, 587. 70

Clothing, manufacture of, by Quartermaster Corps.—Item 252A.

Breeches:	
9,437,670 pairs, at \$0.659-----	\$6, 219, 424. 53
Caps:	
7,600,000, at \$0.10-----	760, 000. 00
Coats, denim:	
5,181,633, at \$0.32-----	1, 658, 122. 40

Overalls:	
6,831,633, at \$0.355	\$2, 425, 229. 60
Overcoats:	
7,260,000, at \$2	14, 520, 000. 00
Coats, service:	
7,861,795, at \$1.649	12, 964, 099. 95
Shirts:	
14,007,480, at \$0.404	5, 659, 021. 92
Total	44, 205, 898. 41

Clothing, manufacture of, by contractors.—Item 252B.

Breeches, wool:	
9,437,670 pairs, at \$0.659	\$6, 219, 424. 53
Coats, denim:	
5,181,633, at \$0.32	1, 658, 122. 40
Overalls:	
6,831,633, at \$0.355	2, 425, 229. 60
Coats, service:	
7,861,795, at \$0.487	12, 964, 099. 95
Jerkins, leather:	
4,300,000, at \$0.80	3, 440, 000. 00
Total	26, 706, 876. 48

Clothing, purchase of—Item 252C.

10,462,000 blankets, at \$6.25	\$65, 387, 500. 00
35,532,760 drawers, winter, pairs, at \$1.50	53, 299, 140. 00
5,100,000 gauntlets, winter, pairs, at \$3	15, 300, 000. 00
1,299,940 gloves, yellow, H. H., pairs, at \$1.26	1, 637, 924. 40
7,499,860 gloves, riding, pairs, at \$2.10	15, 749, 706. 00
9,910,620 gloves, woolen, pairs, at \$0.64	6, 342, 796. 80
7,297,580 hats, service, at \$1.65	12, 041, 007. 00
12,976,460 leggins, foot, pairs, at \$1	12, 976, 460. 00
1,025,600 leggins, mounted, pairs, at \$2.15	2, 205, 040. 00
24,000,000 moccasins, pairs, at \$1	24, 000, 000. 00
23,699,200 shoes, field, pairs, at \$4.65	110, 201, 280. 00
7, 177, 350 slickers, at \$4.10	29, 427, 135. 00
34,069,360 stockings, wool, heavy weight, pairs, at \$0.45	15, 331, 212. 00
18,995,090 stockings, wool, light weight, pairs, at \$0.31	5, 888, 477. 90
6,000,000 toques, at \$0.84	5, 040, 000. 00
37,420,980 undershirts, wool, at \$1.50	56, 131, 470. 00
Total	430, 959, 149. 10

Equipage, manufacture of, Quartermaster Corps—Item 258-a.

7,871,500 bed sacks, at \$0.12	\$944, 580. 00
1,794 tents, hospital, tropical, at \$37.50	67, 275. 00
2,903 tents, hospital, ward, at \$98	284, 494. 00
424,410 tents, pyramidal, at \$17	7, 214, 970. 00
2,386,300 tents, shelter, halves, at \$0.45	1, 073, 835. 00
125,654 tents, storage, at \$29	3, 643, 966. 00
11,868 tents, wall, large, at \$15	178, 020. 00
94,299 tents, wall, small, at \$14	1, 320, 186. 00
1,794 flies, tent, hospital, tropical, at \$1.28	2, 296. 32
125,654 flies, tent, storage, at \$4.45	559, 160. 30
35,991 flies, tent, wall, large, at \$5.50	197, 950. 50
94,299 flies, tent, wall, small, at \$2	188, 598. 00
141,522 screens, latrine, at \$3	424, 566. 00
Total	16, 099, 897. 12

7,871,500 bed sacks:	
8,996,000 yards drilling, at \$0.19-----	\$9, 186, 040. 50
Trimnings, etc., at \$0.353-----	2, 778, 639. 50
1,794 tents, hospital, tropical:	
230,662 yards duck, 12.4 ounce, at \$0.50-----	115, 331. 00
50,281 yards duck, 8 ounce, at \$0.22-----	11, 061. 82
10,317 yards duck, white, at \$0.548-----	5, 653. 72
897 yards drilling, at \$0.19-----	170. 43
32,292 slips, No. 2, at \$0.033-----	1, 065. 64
Trimnings, etc-----	14, 906. 35
2,903 tents, hospital ward:	
841,870 yards duck, 12.4 ounce, at \$0.50-----	420, 935. 00
52,254 yards duck, 8 ounce, at \$0.22-----	11, 495. 88
11,612 plates and chains, at \$0.299-----	3, 471. 99
209,016 slips, No. 2, at \$0.033-----	6, 897. 53
Trimnings, etc., at \$5-----	14, 515. 00
424,410 tents, pyramidal:	
41,592,180 yards duck, 12.4 ounce, at \$0.50-----	20, 796, 090. 00
3,183,075 yards duck, 12.4 ounce, at \$0.22-----	700, 276. 50
424,410 plates and chains, at \$0.30-----	12, 732. 30
11,883,480 slips, No. 2, at \$0.033-----	392, 154. 84
424,410 squares, at \$0.54-----	229, 181. 40
Trimnings, etc., at \$2-----	848, 820. 00
125,654 tents, storage:	
23,874,260 yards duck, 12.4 ounce, at \$0.50-----	11, 937. 130. 00
1,130,886 yards duck, 8 ounce, at \$0.22-----	248, 794. 92
3,015,696 slips, No. 2, at \$0.033-----	99, 517. 97
Trimnings, etc., at \$1.50-----	188, 481. 00
Total-----	48, 023, 363. 29
2,386,300 shelter halves:	
12,726,933 yards duck, shelter, at \$0.30-----	4, 963, 504. 00
298,288 yards duck, shelter, 12.4-ounce, at \$0.50-----	149, 144. 00
Trimnings, at \$0.15-----	357, 945. 00
11,868 tents, wall, large:	
1,287,678 yards duck, 12.4-ounce, at \$0.50-----	643, 839. 00
94,944 yards duck, 8-ounce, at \$0.22-----	20, 887. 68
213,624 slips, No. 2, at \$0.033-----	7, 049. 59
Trimnings, etc., at \$1-----	11, 868. 00
94,299 tents, wall, small:	
1,414,485 yards duck, 12.4-ounce, at \$0.50-----	2, 404, 624. 50
637,125 yards duck, 8-ounce, at \$0.22-----	140, 167. 50
942,990 slips, No. 3, at \$0.028-----	26, 403. 72
Trimnings, etc., at \$2-----	188, 598. 00
1,794 flies, tent, hospital, tropical:	
132,158 yards duck, 8-ounce, at \$0.22-----	29, 074. 76
32,292 slips, tent, No. 3, at \$0.028-----	904. 18
Trimnings, etc., at \$2-----	2, 608. 48
125,654 flies, storage, tent:	
10,177,974 yards duck, khaki, 8-ounce, at \$0.22-----	2, 239, 154. 28
125,654 slips, tent, No. 3, at \$0.028-----	3, 518. 31
Trimnings, etc., at \$2-----	208, 585. 64
35,991 flies, tent, wall, large:	
1,763,559 yards duck, khaki, 8-ounce, at \$0.22-----	387, 982. 98
503,874 slips, tent, No. 3, at \$0.028-----	14, 108. 47
Trimnings, etc., at \$2-----	198, 598. 34
94,299 flies, tent, wall, small:	
2,734,671 yards duck, 8-ounce, at \$0.22-----	601, 627. 62
1,121,588 slips, tent, No. 3, at \$0.028-----	31, 404. 46
Trimnings, etc., at \$2-----	330, 989. 49
141,522 screens, latrine:	
6,320,373 yards duck, 8-ounce, at \$0.22-----	1, 390, 482. 06
1,132,176 slips, tent, No. 2, at \$0.033-----	45, 287. 04
Trimnings, at \$2-----	283, 751. 61
Total-----	62, 705, 472. 00
Grand total for manufacture of equipage-----	78, 805, 369. 12

Item 258B.

Equipage, purchase of—

47,470 bugles and slings, at \$4.50-----	\$213, 615. 00
5,676 colors, camp, at \$1.63-----	9, 251. 88
2,902,500 cots, at \$3.25-----	9, 433, 125. 00

Pins, tent, large:

1,794 tents, hospital, tropical-----	\$64, 584
2,903 tents, hospital, ward-----	197, 404
424,410 tents, hospital, pyramidal---	11, 883, 480
125,654 tents, storage-----	5, 528, 776
11,868 tents, wall, large-----	213, 624
94,299 tents, wall, small-----	2, 074, 578

19, 962, 446 at \$0. 016= 319, 399. 36

Pins, tent, small:

1,794 tents, hospital, tropical-----	46, 644
2,903 tents, hospital, ward-----	150, 456
424,410 tents, pyramidal-----	11, 883, 480
125,654 tents, storage-----	4, 523, 544
11,868 tents, wall, large-----	308, 568
94,299 tents, wall, small-----	1, 697, 382

18, 610, 574 at \$0. 0135= 251, 242. 74

Pins, tent, shelter:

2,386,300 shelter, halves, 11,931,500 pins, at \$0.006-----	71, 589. 00
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Poles, tent:

1,794 hospital, tropical—

1,794 upright, at \$0.86 per set-----	1, 542. 84
3,588 ridge, at \$9.58 per set-----	17, 186. 52
7,176 wall, at \$0.92 per set-----	1, 650. 48

2,903 hospital, ward—

11,612 upright, at \$3.52 per set-----	40, 874. 24
11,612 wall, at \$1 per set-----	11, 612. 00
424,410 pyramidal, at \$1.05 per set-----	445, 630. 50
2,386,300 shelter, at \$0.25 per set-----	596, 575. 00

125,654 storage—

125,654 upright, at \$1.26 per set-----	158, 324. 04
376,962 ridge, at \$12.09 per set-----	1, 519, 156. 86
1,005,232 wall, at \$2.48 per set-----	311, 621. 92

11,868 wall, large—

11,868 upright, at \$1.15 per set-----	13, 648. 20
23,736 ridge, at \$2.94 per set-----	34, 891. 92

94,299 wall, small—

94,299 upright, at \$0.45 per set-----	42, 434. 55
188,598 ridge, at \$2.32 per set-----	218, 773. 08

78,690 shields, tent, at \$0.21-----	16, 524. 90
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288,980 stores, tent, at \$2.60-----	751, 348. 00
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131,580 stovepipe elbows, at \$0.17-----	22, 368. 60
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1,365,900 stovepipe joints, at \$0.25-----	341, 475. 00
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301,860 spark arresters, at \$0.21-----	63, 390. 60
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2,560 instruments, band, sets, at \$2,000-----	5, 120, 000. 00
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Total ----- 20, 027, 251. 79

(Thereupon the committee adjourned, to meet to-morrow, Wednesday, January 16, 1918, at 10.30 o'clock a. m.)

ARMY APPROPRIATION BILL, 1919.

COMMITTEE ON MILITARY AFFAIRS,
HOUSE OF REPRESENTATIVES,
Wednesday, January 16, 1918.

The committee met at 10.30 o'clock a. m., Hon. S. Hubert Dent, jr. (chairman), presiding.

STATEMENTS OF MAJ. GEN. HENRY G. SHARPE, QUARTERMASTER GENERAL, ACCOMPANIED BY BRIG. GEN. I. W. LITTELL, LIEUT. COL. M. C. BRISTOL, AND LIEUT. COL. R. H. WILLIAMS, QUARTERMASTER CORPS—Continued.

The CHAIRMAN. The next item is:

Horses for Cavalry, Artillery, Engineers, and so forth, \$28,755,991.

The appropriation under this item last year was \$65,400,000, so that you are now asking for less than half the amount you received at the last session.

Gen. SHARPE. I would like to submit a table showing the various items, divided into the requirements for the United States and the Philippine Islands, and then tables giving an explanation of each one of the items of the appropriation.

The CHAIRMAN. Under the head of transportation, I understand you will put in a detailed statement as to the number of animals that item provides for.

Gen. SHARPE. Yes, sir. This item is for horses for the Artillery, Cavalry, and Engineers.

The CHAIRMAN. General, do you know how many Cavalry regiments were transformed into Artillery and Infantry under the act we recently passed?

Gen. SHARPE. Col. Bristol can tell you that.

Col. BRISTOL. Eight regiments.

The CHAIRMAN. On what sized army is this based?

Gen. SHARPE. This is based on an army of 1,612,245 men.

The CHAIRMAN. How many regiments of Cavalry are there now.

Col. BRISTOL. We have 17 regiments of actual Cavalry. The other eight regiments are really Cavalry, but they have been transposed into Artillery, making 25 in all.

The CHAIRMAN. You had 25 in the Regular Army, did you not?

Col. BRISTOL. Yes, sir.

The CHAIRMAN. Did you not transform some National Guard Cavalry also?

Col. BRISTOL. No, sir.

The CHAIRMAN. I know of one instance myself.

Mr. McKENZIE. I know that the First Illinois Cavalry was transformed.

Col. BRISTOL. I was talking about the Regular Army regiments. As to the Cavalry in the National Guard which was transferred I could not say.

Mr. MORIN. There was one regiment in Pittsburgh that was transformed, the First Regiment.

Mr. HULL. There was one in Iowa.

The CHAIRMAN. The regiment which I referred to, in Alabama, was a complete regiment.

Mr. KAHN. One of the California regiments has been transformed into a Field Artillery regiment. Have any of the Cavalry regiments been transformed into Infantry regiments?

Col. BRISTOL. No, sir; except that one of the regiments have been sent over dismounted, the Third Cavalry has gone.

Mr. KAHN. They will act as Infantry?

Col. BRISTOL. They are acting as Infantry now.

Mr. KAHN. Where are the Cavalry regiments that we have, stationed at the present, along the Mexican border?

Col. BRISTOL. They are practically all along the border, at different stations. We have one regiment in the Philippines and one in Hawaii.

Mr. KAHN. Those are all along the border?

Col. BRISTOL. Except the Second Cavalry. We have some up here, but they are practically all along the border.

Mr. KAHN. We passed some legislation recently providing for a whole division of Philippine soldiers to be organized, with a possible view of utilizing them along the border. Would they have to be trained as Cavalry? They would have to be in order to be useful down there, would they not?

Gen. SHARPE. I think not. We have never used any of the Filipinos as Cavalry. They are foot troops.

Mr. KAHN. What are the Philippine Scouts?

Gen. SHARPE. They are foot troops.

Mr. KAHN. So that even if we were to use the Filipinos over here, they probably would not be able to supplement the Cavalry that is now used on the border?

Col. BRISTOL. I do not think they would, sir.

Mr. SHALLENBERGER. Is there any one here who has to do with the purchase of horses?

Col. BRISTOL. Yes, sir; Col. Williams is in charge of the purchasing of the animals.

Mr. SHALLENBERGER. What price do you pay for the different horses you buy, of the heavy draft type?

Col. WILLIAMS. We have a tentative maximum price of \$165 for cavalry horses, \$190 for light artillery horses, and \$230 for heavy artillery horses.

Mr. SHALLENBERGER. Colonel, can you tell the committee how that price compares with the price you were paying for the same type of horses before the European war? Do you recall what you paid for the same type of horses in 1913 and 1914?

Col. WILLIAMS. No; I can not.

Mr. SHALLENBERGER. Is it not about the same price?

Col. BRISTOL. It is a little bit higher for all of them, especially the heavy draft horses. We did not use many heavy draft horses at that time.

Mr. SHALLENBERGER. You paid about the same for the cavalry horses?

Col. BRISTOL. We pay just a little bit more for them now. The average price before was about \$147 or \$150.

Mr. SHALLENBERGER. You buy these horses either from the contractors, or from the farmers. We have had another officer here who told us that you have a system whereby, under certain conditions, you purchase directly from the farmers.

Col. WILLIAMS. We were not able to buy them to any extent.

Mr. SHALLENBERGER. Are you able to get the horses at this price?

Col. WILLIAMS. We think we can get all we want at that price.

Mr. SHALLENBERGER. Is there anything else that the Army purchases in large quantities direct from the producer, except horses?

Col. WILLIAMS. Not that I know of.

Mr. SHALLENBERGER. In the case of beef, which the Army purchases in large quantities, you pay a great deal higher price for it now than you did before the war, according to the testimony which has been given before this committee. According to the testimony the price of beef has advanced nearly 100 per cent, and the price of wool has advanced nearly 300 per cent. I have observed that all these materials have advanced in price because of the war. Why is it, when you buy these horses directly from the farmers you pay practically the same that you did before the war?

Col. WILLIAMS. I think it is a very fair price.

Mr. SHALLENBERGER. You think a man can raise a horse to be 6 years old and get a fair profit when he sells him for \$165, taking into consideration the present high price of forage?

Col. WILLIAMS. I think it is a perfectly fair price.

Mr. SHALLENBERGER. You get them at that price?

Col. WILLIAMS. Yes, sir.

Mr. SHALLENBERGER. Do you not think a man ought to have a fair profit on the production of horses?

Col. WILLIAMS. I do not think the Government would be justified in paying any higher price.

Mr. SHALLENBERGER. As a matter of fact, the farmer only gets \$145 for the horse which the Government buys. You have a fixed profit of \$20 to every dealer who buys horses, so that the price the farmer gets is only \$145 in this time of war.

What explanation can your department make of the fact that you are buying 500,000 of these horses from the farmers, and that in the case of the only thing you do buy from the farmers direct, you fix the price, without competition, because the dealer knows he is going to have \$20 margin on the horse, but you do not pay the farmer practically any more than you did before the war, when everything else has advanced tremendously which the Government buys of dealers?

Col. WILLIAMS. The farmer is very much pleased, as a rule, to get anything like \$145 for his horse. It is more than he has ever gotten before for the same class of horse, and the buying for military purposes is practically the whole market. I think the \$20 margin allowed to the dealers is justified by the expense and the risk he undergoes.

Mr. SHALLENBERGER. Is there anything else a dealer buys in the way of articles to be sold in which he is insured any such return as

that upon the investment, considering the fact that he takes no risk at all? He does not take any risk at all upon the horses, does he?

Col. WILLIAMS. Of course he does. He runs the risk of having the horses rejected, in which case they are practically worthless.

Mr. SHALLENBERGER. When the contractor takes the horses to the place where they are to be inspected, he buys a certain number of horses, and the average horse buyer, at least from my experience, knows a horse as well as the Government buyers. We have had testimony here that there are only 50 men in the country that the War Department considers as having the ability to do this work. Is it not a fact that this contractor usually buys the horses with the knowledge that there are a great many horses that will not pass inspection, and therefore he does not make many mistakes, and that most of his horses pass?

Col. WILLIAMS. A very fair proportion of rejects is 30 per cent. If the contractor loses money on 30 per cent, he is going to come very near losing money on the whole lot. The margin of \$20 works out in such a way that if he has a fair proportion of horses accepted and has no other losses he makes a fair profit.

Mr. SHALLENBERGER. Who passes on these horses?

Col. WILLIAMS. We have an inspecting officer and a veterinarian.

Mr. SHALLENBERGER. Are the inspecting officers Regular Army officers?

Col. WILLIAMS. No, sir.

Mr. SHALLENBERGER. You have civilians?

Col. WILLIAMS. They are commissioned in the Reserve Corps, most of them. We have very few Regular Army officers available for that purpose.

Mr. SHALLENBERGER. You have to use them for other duties?

Col. WILLIAMS. Yes, sir.

Mr. SHALLENBERGER. A buyer buying these horses does not really pay an average of \$20 less than your maximum price? Is it not a fact that with your maximum price of \$165 the contractor buys his horses nearer \$100 than \$145, and therefore he fortifies himself against possibilities of loss and that he sells those horses at a price that nets a profit to him, at any rate?

Col. WILLIAMS. No, sir; his rejects cost him from \$30 to \$40 a horse.

Mr. SHALLENBERGER. He loses that much money?

Col. WILLIAMS. He loses that much on his rejects; they are practically worthless.

Mr. SHALLENBERGER. In other words, you mean to say that if he buys a horse at \$130 and he is rejected that he loses \$35?

Col. WILLIAMS. He has to sell him.

Mr. SHALLENBERGER. He has, and he would have to take something like \$100 for the \$130 horse.

Col. BRISTOL. I have had some experience in buying horses, and I remember one case of having shown to me over 200 horses one morning, of which I accepted 19. All the others were rejected. That was last year at Fort Worth. They were a very poor lot, and none of them was very good.

They were all turned back. In a case of that kind the contractor must have lost a good deal of money. Sometimes he goes out and buys the animals for very much less than the contract price, and

at other times they will pay inside of the \$20 margin if they can make sure of \$10 or \$15, provided they are near railroad transportation. But the contractor always has to keep up an establishment and have a number of buyers all over the country, and their expenses have to be paid, and then they have to have their pens at the different points throughout the country besides having their interest in stock yards, and so forth, and that amounts to a great deal of expense for the contractor; so that he has to cover all of that expense in some way by the profit. I know in many cases the contractors have bought animals for very much less than the contract price.

At the same time I have had experience in going into the country and buying horses, especially in Texas, and I have been able to get them at a certain price. That was so in 1916.

I found that when they knew I was coming to a little town along the border, or anywhere in Texas, the animals that were selling, as a rule, for \$75 or \$80 would go up to \$150 when I arrived there. Nearly everybody's price was \$150, no matter what kind of an animal it was. The best that they had they would sell for \$150 and the very poorest they wanted \$150 for, while I was authorized to to pay \$100 or anything I thought they were worth. We did not get very many. Wherever we went we usually found that to be the case.

I think if we had enough experienced officers and veterinarians we could go throughout the country and pick up practically all the horses we needed, if we did not want them in a hurry, in that way, but when we have to get a certain number of horses in a certain time it is practically impossible to do that.

Mr. SHALLENBERGER. It has been stated here that when your department tried the proposition of buying direct from the farmers, the farmers offered a lot of horses which were not suited for the Army service, and thereby implying that the farmer was attempting to put something over on the Government. You have had the same experience with contractors, have you not? They bring you practically as large a percentage of unfit horses as the farmer does, do they not?

Col. BRISTOL. I think they do at first, until they know the inspecting officer. They will soon find what kind of a buyer the inspector is and naturally if they can sell him poor stock they will do so. I do not think the farmer does that any more than the contractor. I would prefer to say the reverse is true.

Mr. SHALLENBERGER. It is a matter of record that a farmer can not raise a good horse until he is 6 years old with feed at its present price and make anything like \$20 on that horse, but the contractor why buys the horses is insured a profit of \$20 on each horse on a very short period of time. I have a statement of the facts in the case of a horse buyer selling to the Government who made over \$6,000 on 87 horses. He made in about three or four weeks as much as we pay a brigadier general in the United Army in a year in times of war, and that sort of profit is made possible by the prices which the Government allows the contractor, thereby enabling the contractor to go out and buy these animals of the farmers at a much lower price, because the farmer knows he can not sell the horse to the Government at the price the dealer gets, and therefore he takes a much lower price, and the dealer is insured against any possibility of loss for the rejections, so that he can make a profit.

The thing that I particularly want to call attention to is that in the case of the horse, which is as essential as any of the other things, that is the one article the Government buys which has practically received no benefit from this war. The farmer who produces the horse is not able to come out whole, so far as the cost of producing the horse is concerned, and the price he gets for him, and I wondered why the War Department has not raised the price of horses to something like the cost to the producer of raising the horse, as has been done in the case of other articles which the Government is buying.

Col. WILLIAMS. I think the reason is we can get the animals we want for this price.

Mr. SCHALLENBERGER. You fixed that price. Have you ever attempted to fix the price of any of the other articles, such as beef and wool? In those cases the price is rather fixed by the men who sell than by the Government, up to date, but you fix the price on the horse.

Col. WILLIAMS. That price fixed by the Government on the horse is based on information.

Mr. SHALLENBERGER. You think it is a fair price?

Col. WILLIAMS. We think it is, compared to the price we would have to pay in the market.

This last spring I saw some horsemen in Nashville, before we had established these prices, and I consulted them and asked about what they thought the price would have to be. The price was lower than they said they thought it would be, but they are quite satisfied, and we are told now that the prices of the animals will be higher next spring than they are now.

Mr. SHALLENBERGER. Do you think, under this price, if the war goes on, you will be able to obtain the horses you need in this country at this price?

Col. WILLIAMS. Personally, I think we will.

Mr. GARRETT. Have you testified as to the number of horses you will need during the present war, or that you anticipate you will need?

Col. BRISTOL. No; we have not given that information.

Mr. GARRETT. Have you that?

Col. BRISTOL. We have not the number of animals, except in detail, based on 45 divisions. For 45 divisions we would require about 155,000 horses. That is for the Cavalry, Artillery, and Engineers.

Mr. GARRETT. One hundred and fifty-five thousand?

Col. BRISTOL. About that, yes, sir. That is without replenishment. That is for the organization of 45 divisions.

Mr. GARRETT. Is that what you need now, in addition to what you should have?

Col. BRISTOL. That provides for the organization of 45 divisions.

Mr. GARRETT. You now have about 340,000 animals, according to the testimony of Col. Fair.

Col. BRISTOL. About that. That includes mules, of course.

Mr. GARRETT. Does the contractor get the same price for buying mules as for buying horses—that is, does he get the same allowance of \$20 per head?

Col. BRISTOL. Yes, sir.

Mr. GARRETT. In other words what you now have on hand, and what you need would amount to 495,000 animals, or, in round numbers, a half million animals?

Col. BRISTOL. Yes, sir.

Mr. GARRETT. On 500,000 animals, at \$20 per head, the contractors would have a profit of \$10,000,000, would they not?

Col. BRISTOL. I do not think we can consider that as profit.

Mr. GARRETT. That is the allowance that he gets?

Col. BRISTOL. Yes, sir.

Mr. GARRETT. What are the specifications required in the cases of these animals. Have you published printed specifications to guide your men in the inspection of these animals?

Col. BRISTOL. Yes, sir; we have them in printed form.

Mr. GARRETT. Will you put those specifications in the hearings?

Col. BRISTOL. Yes, sir.

(The specifications referred to are as follows:)

**SPECIFICATIONS FOR CAVALRY, ARTILLERY, DRAFT, RIDING, AND REMOUNT HORSES
AND DRAFT, RIDING, AND PACK MULES.**

With a view to carrying out the provisions of paragraph 1066, Army Regulations, 1913, the following specifications are hereby published for the guidance of all concerned in the inspection and purchase of public animals for the military service:

GENERAL DESCRIPTION FOR HORSES.

Head.—Small and well set on neck; with ears small, thin, neat, and erect; forehead broad and full; eyes large, prominent, and mild, with well-developed brow and fine eyelid; vision perfect in every respect; muzzle small and fine; mouth deep; lips thin and firmly compressed; nostrils large and fine; and branches of underjaw (adjoining neck) wide apart.

Neck.—Light, moderately long, and tapering toward the head, with crest firm and longer than underside; mane and forelock fine and intact.

Withers.—Elevated, not unduly fine, well developed and muscled.

Shoulders.—Long, oblique, and well muscled.

Chest.—Full, very deep, moderately broad, and plump in front.

Forelegs.—Vertical as viewed from front and side and properly placed; with elbow large, long, prominent, and clear of chest; forearm large at the elbow, long, and heavily muscled.

Knees.—Neatly outlined, large, prominent, wide in front, well situated, and well directed.

Back.—Short, straight, and well muscled.

Loins.—Broad, straight, very short, and muscular.

Barrel.—Large, increasing in size toward flanks, with ribs well arched and definitely separated.

Hind quarters.—Wide, thick, very long, full, heavily muscled, rounded externally, and well directed.

Stifle.—Well defined, prominent, and well supported by muscles of that region.

Tail.—Fine and intact; well carried and firm.

Hocks.—Neatly outlined, lean, large, wide from front to rear, well situated, and well directed.

Limbs.—From knees and hocks downward vertical, short, flat, wide laterally, with tendons and ligaments standing well out from bone and distinctly defined.

Pasterns.—Strong, medium length, not too oblique, and well directed.

Feet.—Medium size, circular in shape, sound; with horn smooth and of fine texture; sole moderately concave, and frog well developed, sound, firm, large, elastic, and healthy.

Each horse will be subjected to a rigid inspection and any animal that does not meet with the above requirements should be rejected. No white or gray horses will be accepted.

SPECIAL DESCRIPTION FOR HORSES.

(a) *Mature cavalry horses and saddle horses for mountain artillery, Signal Corps, Engineer Corps, infantry and other purposes.*—The mature horse must be sound, well bred, of a superior class, and have quality; gentle and of a kind disposition; well broken to the saddle, with light and elastic mouth, easy gaits, and free and prompt action at the walk, trot, and gallop; free from vicious habits, without material blemish or defect.

A gelding of specified color, in good condition; from 5 to 8 years old at time of purchase; weighing from 950 to 1,200 pounds, depending on height, which should be from 15 to 16 hands, and otherwise to conform to general description of horses.

(b) *Specifications for mounts for use in the Panama Canal Zone.*—A gelding or stallion of specified color, in good condition; from 4 to 8 years old at time of purchase; weighing from 800 to 950 pounds, depending on height, which should be from 14 to 15 hands, and otherwise to conform to general description for horses.

Stallions will be purchased only when exceptionally fine individuals, and then only by special authority.

(c) *Artillery horses for light and horse batteries.*—The artillery horse for light and horse batteries must be sound, well bred, of a superior class, and have quality; of a kind disposition, well broken to harness, and gentle under the saddle, with easy mouth and gaits, and free and prompt action at the walk, trot, and gallop; free from vicious habits; without material blemish or defect.

A gelding of special color, in good condition, from 5 to 8 years old at time of purchase; height from 15½ to 16 hands; weight from 1,150 to 1,300 pounds, depending on height, and otherwise to conform to general description for horses, except that the neck and shoulders of the artillery horse should be somewhat more heavily muscled than the cavalry horse, and shoulders so formed as to properly support the collar.

Horses otherwise satisfactory which fall short of or exceed these limits of weight by not more than 50 pounds, due to temporary conditions, may be accepted.

The artillery horse for light and horse batteries is required for quick draft purposes, and should be heavy enough to move the carriage ordinarily by weight thrown into the collar rather than by muscular exertion. Long-legged, loose-jointed, long-bodied, narrow-chested, coarse, and cold-blooded horses, as well as those which are restive, vicious, or too free in harness, or which do not upon rigid inspection meet the above requirements in every respect, will be rejected.

(d) *Artillery horses for siege batteries.*—A gelding conforming to the above specifications for horses for light and horse batteries, except that the animal should be from 16 to 17 hands high and weigh from 1,400 to 1,700 pounds, depending on height.

A smart, active, heavy draft horse, with plenty of bone and substance and enough quality to insure staying power in fairly fast work, is required for this service.

(e) *Medium draft horses.*—The medium draft horse must be sound, well bred, and of a superior class; gentle and of a kind disposition, thoroughly broken to harness, with easy mouth, and free, prompt, straight, and regular action at the walk and trot; free from vicious habits, without material blemish or defect, and otherwise to conform to the general description for horses, except neck and shoulders, which should conform to specifications for artillery horses.

A gelding of uniform and hardy color, in good condition; from 5 to 8 years old at time of purchase; weighing from 1,200 to 1,400 pounds, depending on height, which should be from 15½ to 16½ hands.

(f) *Light draft horses.*—The light draft horse must be sound, well bred, of a superior class, and have quality; of a kind disposition; thoroughly broken to harness; with easy mouth, and free, prompt, straight, and true action at the walk and trot; free from vicious habits; without material blemish or defect; and otherwise to conform to the general description for horses, except neck and shoulders, which should conform to specifications for artillery horses.

A gelding of uniform and hardy color, in good condition; from 5 to 8 years old at time of purchase, weighing from 1,100 to 1,250 pounds, depending on height, which should be from 15½ to 16½ hands.

(g) *Young horses for cavalry, artillery, and other purposes.*—The young horse must be sound, well bred, of a superior class, and have quality; gentle, free from vicious habits, and of a kind disposition, broken to halter, with free and prompt action at the walk, trot, and gallop; without material blemish or defect, and otherwise to conform to general description for horses, and also to the following special requirements:

A gelding of specified color in good health and fair condition.

Two-year-olds.—Minimum height, 14½ hands; minimum weight, in flesh, 750 pounds. No two-year-olds will be purchased except when specially authorized.

Three-year-olds.—Minimum height, 15 hands; minimum weight, in flesh, 900 pounds.

Four-year-olds.—Minimum height, 15 hands; minimum weight, 950 pounds. Weight depending upon height.

MARES.

Mares will be purchased only when exceptionally fine individuals, and then only by special authority, but neither young nor mature mares will be purchased for the classes of horses described under (a) and (c).

SPECIFICATIONS FOR DRAFT MULES.

The draft mule must be sound, well bred, and of a superior class; of a kind disposition, free from vicious habits, gentle, and well broken to harness, with free and springy action at the walk and trot; without material blemish or defect, and otherwise to conform to the following description:

A mare or gelding of uniform and hardy color, in good condition; from 3 to 8 years old; weight and height to be as follows:

Three-year-old mules will be purchased only when exceptionally fine individuals.

Wheel mules to weigh from 1,150 to 1,250 pounds, depending on height, which should be from 15½ to 16½ hands high.

Lead mules to weigh from 1,000 to 1,150 pounds, depending on height, which should be from 15 to 15½ hands high.

Head.—Well formed and of medium size, with ears long, tapering, and erect; forehead broad and full; eyes large, clear, prominent, and mild, with well-developed brow and fine eyelid; vision perfect in every respect; teeth sound and meeting vertically; tongue free from blemishes; muzzle well rounded and firm, with large nostrils.

Neck.—Medium length and smoothly joined to the shoulder and withers, with crest firm, full, and inclined to arch.

Shoulders.—Long, oblique, well and smoothly muscled, and so formed as to provide proper support for the collar.

Chest.—High, wide, very deep and full.

Back.—Short, straight, well and smoothly muscled.

Loins.—Broad, straight, very short and muscular.

Barrel.—Large, with ribs well arched and definitely separated from each other.

Fore legs.—Vertical from both front and side view and properly placed; with elbow large, long, and clear of chest; forearm large, very long, heavily muscled, and vertical.

Knees.—Large, wide in front, well placed, and free from blemishes.

Hind quarters.—Wide, thick, very long, full, heavily muscled, rounded externally, and well directed.

Hocks.—Neatly outlined, lean, free from puffs, large, wide from front to rear, and well directed. Gaskins well developed.

Limbs.—From knees and hocks downward vertical, short, flat, wide laterally, with tendons and ligaments standing well out from bone and distinctly defined.

Pasterns.—Strong, medium length, not too oblique, and well directed.

Feet.—Medium size and round; with horn smooth and of fine texture; frog well developed, elastic, and healthy.

Each mule will be subjected to a rigid inspection, and any animal that does not meet the above requirements should be rejected.

SPECIFICATIONS FOR PACK AND RIDING MULES.

Pack and riding mules will conform to specifications for draft mules, except as follows: Height, from 14½ to 15½ hands; weight, from 950 to 1,150 pounds. Of stocky build; neck stocky, broad, and strong; back short and straight, showing strength of loins; barrel very large and deep, indicating a good feeder; dock low and stiff; pasterns short, strong, and not too oblique.

SPECIFICATIONS FOR PACK AND RIDING MULES FOR USE IN THE PANAMA CANAL ZONE.

Pack and riding mules for use in the Panama Canal Zone will conform to specifications for draft mules, except as follows: Height, from 13 to 14 hands; weight, from 700 to 850 pounds. Of stocky build; neck stocky, broad, and strong; back short and straight, showing strength of loins; barrel large and deep, indicating a good feeder; dock low and stiff; pasterns short, strong, and not too oblique.

J. B. ALESHIRE,
Quartermaster General, U. S. Army.

Approved:

By order of the Secretary of War.

W. M. WRIGHT, Adjutant General.

JANUARY 25, 1916.

Mr. GARRETT. How long would it take the average intelligent farmer boy or man between the ages of 21 and 31 years now in the service, to learn those specifications so that he would be able to buy horses suitable for the Army? How long would you say it would take him to be able to do that?

Col. BRISTOL. A very small percentage are ever successful as horse buyers for the Army.

Mr. GARRETT. Why?

Col. BRISTOL. Some men can not become horsemen. We find often men who have been accustomed to animals all of their lives, and who are good riders and good trainers and good handlers of animals, can not buy animals. I have seen men try to buy horses, and they will reject them, and the contractor will bring the rejects back within a few minutes and the buyer does not recognize the horses he has seen.

Then again, we have an instance of this kind. I remember a case that was brought up the other day of a civilian who is well known in the country as a buyer in the West, and the story was told on him that they could not possibly bring a horse back after he had once seen it. He would say, "I told you the other day I did not care about that animal," and he will pass it along. He is an exception.

Mr. GARRETT. That is an exceptional case?

Col. BRISTOL. Yes, sir.

Mr. GARRETT. Would that not also be true of almost any officer in the Army to-day? If you were to pass before him a thousand men in uniform, and call them by name, and then bring them back the next day, he could not recognize one-tenth of them.

Col. BRISTOL. No; he could not, of course.

Mr. GARRETT. Why should a man be expected in the Army to recognize a bay horse that was different from some other bay horse that he had brought before him a few hours before unless there was some specific mark on the horse?

Col. BRISTOL. I suppose no man can recognize every one, but some men will recognize a great many more than others.

Mr. GARRETT. That is the exception, rather than the rule. You require the Army horse which is used in the Cavalry to be so many inches high, approximately, and so many years old, and so many years young. They are to be without spavins or splints, or anything of that kind; is that true?

Col. BRISTOL. Yes, sir.

Mr. GARRETT. In other words, he has to have clean joints, and he has to be a well-rounded horse?

Col. BRISTOL. Yes, sir.

Mr. GARRETT. Does not the average farmer boy know that kind of a horse the minute he lays his eyes on him?

Col. WILLIAMS. No, sir; not to my mind, anyway.

Mr. GARRETT. What is there about it that a man who is born and raised among horses, and who can tell how old a horse is by looking into his mouth, until he is 10 years old—what is there to prevent him from going out and selecting a horse when you hand him the specifications and tell him not to get any other kind of a horse than that described in the specifications? Why can he not do that?

Col. BRISTOL. In the first place, we can not find the specification horse in the country; that is, the actual specification horse, and so we have to accept those that come nearest to the specifications. In

other words, we do not want a buyer buying those that are too far away from the specifications.

There are certain well-known parts of a horse that we object to, and experience has shown that we should get away from them. Those things the average farmer does not understand. After being in the service a while, perhaps he does know more about it.

For instance, we object to a short back, and while the animal may be perfectly clean, and have no spavins or splints, or anything of that kind, no defects, yet that horse is unsuitable for Army purposes.

Mr. GARRETT. He is coupled too short?

Col. BRISTOL. He is coupled too long, generally, instead of having a short back. We try to get as near to the specifications as we can, but we do not expect to get a real specification horse, naturally. There are none.

Mr. GARRETT. It is a question of the exercise of judgment and discretion, when the specifications would not be followed?

Col. BRISTOL. Yes, sir. We must get as near as we can to the specifications.

Mr. GARRETT. According to these figures, the Government is paying, whether it be profit or what not, in buying these 500,000 horses, it is paying \$10,000,000 to the contractors to select them for the Government. Have you ever considered at this time the question of having an officers' training camp to train men in the selection and purchase of horses?

Col. BRISTOL. To a certain extent we did that at Atlanta this season. At each one of our purchasing zones we ordered certain reserve officers, who were supposedly horsemen, and also experienced Cavalry officers to go to this place and instruct these officers in the art of buying horses. I myself went to Front Royal, and there were several experienced civilians who had been commissioned in the Reserve Corps for that purpose. Very few of those officers are now buying horses.

Mr. GARRETT. Do you not think the Government would make a considerable saving by having a training school of that kind, and putting those men out over the country to gather up these horses you want, just as the Army puts men out in the different cities to recruit soldiers, and that purchasing officer could have his zone and invite all the farmers in that part of the country to bring their horses in on a certain day for inspection and examination, and have that man an officer of the Army and not a contractor, a man sworn to represent the Government of the United States, with a uniform on, who has been commissioned, and let him buy up the horses and grade them for the Army. Let him be there and let him tell the producer what is the standard price the Government will pay for all horses the producers have that meet the requirements of the Government.

Col. BRISTOL. That could be done, provided we could get enough experienced officers for that purpose. We would have to have a very large number to cover the country the way the contractors have the country covered now by their buyers.

Mr. GARRETT. How many would it require to cover the country with officers to get these horses as you are going to want them?

Col. WILLIAMS. To get them all together I should say it would require five or six thousand officers.

Mr. GARRETT. How many contractors have you buying for the Government now?

Col. WILLIAMS. Contractors?

Mr. GARRETT. Yes.

Col. WILLIAMS. I do not know exactly, but some of them have had 35 or 40 buyers of their own. Some of them have an organization of two or three hundred men. We would have to practically duplicate that organization in order to get the animals.

Mr. GARRETT. What kind of men are these men that are out buying these horses for the contractors?

Col. BRISTOL. They are their own buyers. They send them out with a blank check book, and if they average three horses a day they consider themselves very fortunate.

Mr. GARRETT. Do you not think that those men that are buying horses for the contractors would prefer to have a uniform on and do the buying for the Government?

Col. BRISTOL. I would prefer not to have them.

Mr. GARRETT. As a matter of fact, the contractor is not a horseman at all, as a rule. Most of them are men that simply take a gamble on gathering up the horses and selling them to the Government and they send out these buyers to gather up the horses at the various places, but the contractor himself is not, in most cases, a horseman or a good judge of horses.

Col. BRISTOL. In most cases there is one horseman in the firm and the other men furnish the money.

Mr. GARRETT. And they go out and pick up these men to tell them what kind of horses they want. They rely on the judgment of subordinates to get the horses?

Col. BRISTOL. Yes, sir.

Mr. GARRETT. What percentage of horses are rejected?

Col. BRISTOL. A fair percentage would be from 20 to 30.

Mr. GARRETT. Then these men who are gathered up to go out and select the horses are from 70 to 80 per cent correct in their judgment?

Col. BRISTOL. Yes, sir.

Mr. GARRETT. Could not they render that same service for the United States Government, and render it cheaper to the Government than to the contractors?

Col. BRISTOL. I do not think so. I think it would be a great mistake to turn those men loose as Government buyers.

Mr. GARRETT. Why do you think it would be a mistake? We turn all of our officers of the Army loose here for the Government, to buy different things for the Government; why not horses?

Col. BRISTOL. It took us about 12 months to decide on these 50 men we have in this work. It took us that long to decide that these men were capable of doing it, and that was because of the high standard of the specifications, and the knowledge of horses necessary, and I think it would be a great pity to turn loose a large number of those men, or even any of those men who are now buying for the dealers, and to commission them.

Mr. GARRETT. I do not mean to commission those men who are buying for the dealers particularly, but I mean men of their capacity, who can judge horses. You would not have to take those men.

Col. BRISTOL. I do not think the Government would get anywhere near as good a class of horses.

Mr. ANTHONY. Colonel, the only criticism I can think of so far as the present method of buying horses is concerned is that the grower of the horses, the farmer, is too far removed from the Government purchasing agent. It strikes me it would be more satisfactory, at least to the grower of horses, if you could adopt a modification of Mr. Garrett's idea, and have your representative visit, say the county seats of the different counties in the territory contiguous to the military posts on certain days and let the growers know that he is going to be there, and on those days the farmers would respond, if you asked them to bring their horses that they think are available for Government use, ask them to bring those horses to a certain point on a certain day. I believe they would be only too glad to bring them there, and it would give you an opportunity to get the cream of the horses of each particular county.

As it is now the farmer has to deal with the buyers, who have to go out and locate the horses, or the farmers if they want to sell their horses have to try to locate the horse buyer and frequently they can not get in touch with him, and the farmer considers that there is too much of a gap between himself and the Government in the sale of the horses. Why could you not require local posts or local organizations to purchase their own horses? There are men with the regimental organizations who are responsible enough to do that work.

Col. BRISTOL. You mean at each camp or cantonment?

Mr. ANTHONY. Yes.

Col. BRISTOL. There are a great many in places where they can not get those animals. Certain classes of animals come from certain districts, and if you had that plan in operation, you would not know how many horses you would get. The farmers may bring them in and they may not. When you have a proposition to get 250,000 in about 10 weeks, you have got to be sure of getting them. We could not rely on that kind of a plan and run the risk of not getting the number we wanted when we wanted them.

Mr. ANTHONY. Under the present system of purchasing these animals, the farmer is absolutely at the mercy of the horse speculator. He can not deal with the Government direct, and he feels when he has a horse suitable for military purposes he has to allow a speculator to make a profit on it, that is probably greater than it would be if he was dealing direct with the Government.

Col. BRISTOL. In order to get a large percentage of our horses direct from the farmers, you would have to duplicate the dealers' organizations; otherwise you can not get them.

Mr. ANTHONY. You have a quartermaster's organization at all these posts. Certainly those quartermaster officers are capable of doing that, and if they are not, there are men there who know how to buy horses, and with that organization it seems to me that it would be possible to buy horses through the local representatives of your department.

Col. BRISTOL. Suppose we wanted to buy horses at Camp Upton, on Long Island, through the local quartermaster, how would you get them?

Mr. ANTHONY. I would not consider that a proper place for the Government to buy horses. But take Camp Funston, or Fort Riley. They are in the center of horse-growing activities, and there must be

plenty of men there with a good knowledge of purchasing horses, who could purchase them if they had the authority. Is there any one there with authority to purchase horses?

Col. BRISTOL. No; there is not.

Mr. ANTHONY. Would it not be proper to authorize those men to buy for the Government?

Col. BRISTOL. No, I think it would be a pity, because you would still be up against the proposition of not knowing how you were to get your horses, and how many you were going to have. Under that plan, it would be perfectly indefinite.

Mr. ANTHONY. But would it cost the Government any great amount to purchase animals in that territory? Say the Government wanted a thousand animals near Fort Riley. It would cost a few dollars to publish a notice stating that fact in the newspapers, and it would cost a few dollars more to have a representative of the Government there to inspect the horses when they were brought in. Have you ever tried that method?

Col. BRISTOL. Time after time.

Mr. ANTHONY. With any success?

Col. BRISTOL. Practically none.

Mr. ANTHONY. I am a stock raiser myself. I have horses and mules I would like to sell to the Government, if I could get in touch with the Government purchasing agents, but the only people I can reach are the horse buyers that come through the country, and we are afraid to sell to them because we fear that we will not get the value of the animals, but if there was a representative of your department there we would be only too glad to sell them.

Col. BRISTOL. If you will furnish a carload lot and get in touch with the purchasing officer, he will send an inspector there.

Mr. ANTHONY. It is impossible for a farmer to do that.

Col. BRISTOL. Can the Government afford to do the other thing?

Mr. ANTHONY. Unquestionably, in my opinion, it can.

Col. BRISTOL. I do not agree with you on that.

Gen. SHARPE. In 1916, we had a number of horses in the New England States and they were shipped to the South, and I think you heard of the condition of the horses which arrived down there.

Mr. ANTHONY. I did not. I would like to ask you one other question.

Are you buying anything but seasoned horses now? Are you buying any young animals for training?

Col. BRISTOL. We were just authorized to purchase a few in Montana, and they are to be trained at Fort Keogh.

Mr. ANTHONY. Do you find it is paying the Government to purchase horses of tender age?

Col. BRISTOL. There is a difference of opinion in regard to that. Some officers prefer the animals from the remount stations that have been bought when they were young and taken care of there, while other officers do not.

Gen. SHARPE. We feel a sort of obligation to buy some of those young animals that have been bred by the stallions we have around in the country among the farmers. We have felt that we were under a sort of an agreement to buy those provided the farmers would breed from those stallions.

Mr. ANTHONY. But for purposes of war you are buying only mature animals?

Gen. SHARPE. Yes, sir.

Mr. GORDON. If I understood you correctly, in fixing the price you pay for these horses you are governed by the law of supply and demand.

Col. WILLIAMS. We took what we considered to be a fair price for the Cavalry type of animal and we said we would not consider giving a higher price at the time.

Mr. GORDON. And that price is determined by the law of supply and demand?

Col. WILLIAMS. Exactly.

Mr. GORDON. You do not feel the Government would be justified in paying more for horses than other people?

Col. WILLIAMS. I think the Government would be unjustified in paying a higher price for Cavalry horses than they do pay. I think they ought to get a fair type of horse for that price.

Mr. GORDON. If this organization controlled by the horse buyers, which you deal with direct were to be taken over by the Government, the Government would have on its hands from 20 to 30 per cent of the horses that had been bought, and which could not be used in the service.

Col. WILLIAMS. Absolutely.

Mr. GORDON. And the losses on those horses would probably amount to as much as you pay these men in commission? The Government could not use them at all?

Col. WILLIAMS. No. The idea is to lower the percentage of rejects as much as you can. Even when you use the services of the horsemen you can get, you are going to have some unsuitable animals.

Mr. GORDON. These men to whom you pay commissions are required to maintain stables in which to keep the horses until the Government can send a man there to inspect them, in order to determine whether it will take them or not, and they have left on their hands between 20 and 30 per cent of rejects, which they are required to dispose of upon the best terms they are able to get?

Col. WILLIAMS. Exactly. They have to pay the expenses of their buyers and the expense of maintaining their organization.

Mr. MCKENZIE. Is it not a fact that there is a good deal of sentiment among a certain class of people against selling their horses for war purposes?

Col. WILLIAMS. There has been in some cases.

Mr. MCKENZIE. Would not that be obviated by your system of purchasing through contractors? I am asking that question as a response to inquiries propounded to you by Mr. Anthony.

Suppose you would have a man go into the county seat of his county, or into the county seat of the county in which I live, and advertise that he was buying horses for the war against Germany. Do you believe that the farmers, as a rule, would rush in to sell these horses, knowing they were going directly into that war, as readily as they would if a contractor were buying the horses unknown to to them?

Col. WILLIAMS. I do not think the farmer will go to the county seat and sell his horses as readily as if you go to the farmer. I do not know how much that sentiment would have to do with it.

Mr. FIELDS. In that connection, is it not a fact that the local dealer knows the farmer, knows how to deal with him, knows how to approach him, and would come nearer to buying his horses than a man in uniform who is there representing the United States Government?

Col. WILLIAMS. Of course he will; there is no question about that.

Mr. FIELDS. I am a horse raiser, like Mr. Anthony, and I have sold horses ever since I was old enough. I do not understand how the Government could buy the horses direct and get as many as they want.

Col. WILLIAMS. They can not get them in the proper length of time.

Mr. FIELDS. Of course, in the buying of horses, it is a question of jockeying and barter, and a man often sells the horse for \$25 or \$50 less than he first asked for it. Perhaps he has a pair of horses. If he sells one of them he has got to sell both of them. One is an Army horse and the other is not. The dealer is a man who deals in horses. He can buy both of them, because he can place one of them with the Government, and he knows where he can place the other one somewhere else.

Is it not like all other business? A manufacturer of goods does not sell them direct to the consumer. The consumer would not get the goods if he depended upon getting them from the manufacturer. The manufacturer does not understand dealing directly with the consumer. It takes the middleman to deal with the consumer. I know there is a good deal of prejudice against the middleman, but I doubt if the business of the country could be handled without the middleman, because he is the man who goes between the producer and the consumer and adjusts the differences of opinion and keeps business going.

Mr. McKENZIE. If I understand Mr. Anthony and Mr. Garrett correctly, the point they are emphasizing is the protection of the farmer. Do you think the farmer would have more nerve to ask one of the local buyers a fair price for his horse than he would a man in uniform?

Mr. FIELDS. I think he would ask the man in uniform a considerably higher price than he would the local dealer. I think the man in uniform could not handle him like the local dealer. If he asked \$175 for a \$150 horse, the deal would stop there, and the Government would not get the horse, whereas the local dealer would buy the horse eventually for \$150.

Mr. KAHN. I would like to ask this question, if you please. The Government, I take it from what you have stated, is about the largest purchaser of animals that there is in this country?

Col. WILLIAMS. Yes, sir.

Mr. KAHN. By reason of that fact, do not the Government purchases help to increase the general price of the draft animals and animals that would be used in the military establishment?

Col. WILLIAMS. Yes, sir.

Mr. KAHN. If the Government bought no horses at all, the price that the farmer would receive for his animals would materially decrease; do you not think so?

Col. WILLIAMS. I do not think that for the Cavalry horse they would get anything like the price we are paying them.

Mr. KAHN. I take it the price is even higher now than it would have been if it had not been for the large purchases of draft animals and other animals that were made in this country by the allied nations.

Col. WILLIAMS. Yes, sir.

Mr. KAHN. Can you give this committee an idea of how many mules and horses were purchased by the allied nations before this country got into the war; how many of those animals were taken out of the country?

Gen. SHARPE. We can get those figures.

Mr. GARRETT. And what they paid for them?

Mr. KAHN. And the character of horses they were?

Gen. SHARPE. Yes, sir; we can furnish that information.

Mr. KAHN. That great number of horses and mules taken from the supply of the country also added materially to the present cost of the animals, did it not?

Col. WILLIAMS. Yes; there is no question about that.

Mr. ANTHONY. Is it not a fact that the Government price is a fixed price?

Col. WILLIAMS. No, sir.

Mr. ANTHONY. Do you have a flexible scale of prices?

Col. WILLIAMS. Yes, sir; we have a maximum price, and we buy for anything under that that we can get them for.

Mr. ANTHONY. What difference is there between the maximum and the minimum prices?

Col. WILLIAMS. We bought some horses as low as \$137 for the Cavalry.

Mr. ANTHONY. Were they horses that came up fully to the Army specifications?

Col. WILLIAMS. Absolutely.

Mr. ANTHONY. Does the price vary in different parts of the country?

Col. WILLIAMS. That is the maximum price in all parts of the country.

Mr. ANTHONY. What did you say is the difference between the maximum and the minimum?

Col. WILLIAMS. I say we bought some—I think it was only one lot—as low as \$137.50

Mr. ANTHONY. When was that?

Col. WILLIAMS. That was out West. It was in September or October.

Mr. ANTHONY. What did you pay for the small horses you bought on the border during the border troubles—when you bought a great many undersized animals?

Col. BRISTOL. We bought some as low as \$107. I remember one contract at \$107, and then there was another at \$120.

Mr. ANTHONY. When these buyers go out and buy Government horses, do they have any assurance from you as to what price you will pay them for the horses when they are brought in?

Col. BRISTOL. They usually do not buy the horses until they have a contract with the Government to supply a certain number of animals, and we fix the price according to the specifications. The specifications for the small horses are very different from the specifications for the regular Cavalry horses.

Mr. ANTHONY. So the buyer purchases them as cheaply as he can from the farmer?

Col. BRISTOL. Oh, yes.

Mr. ANTHONY. And he has the benefit of all the profit he can make in between you and the farmer?

Col. BRISTOL. Yes, sir; we do not know what he pays for the animals.

Mr. ANTHONY. You do not know how much he pays for the animals?

Col. BRISTOL. No, sir.

Mr. GARRETT. What are the average prices that prevail now for your horses for the Cavalry?

Col. WILLIAMS. Very close to the maximum.

Mr. GARRETT. Very close to the maximum? What was the maximum?

Col. WILLIAMS. It was \$165.

Col. BRISTOL. The contractor is chosen after numerous bids are put in by different contractors, and as a general rule the lowest bid is accepted, and that establishes the price paid that contractor for his contract.

Mr. GARRETT. How long has \$165 been the maximum price for a horse?

Col. WILLIAMS. That price has not been announced as a maximum price. That is a confidential price.

Mr. GARRETT. What do you mean by a confidential price?

Col. WILLIAMS. I mean we have not told the dealers that was the maximum price. We have simply asked them to submit bids.

Mr. GARRETT. What has been the maximum price before this confidential price of \$165?

Col. BRISTOL. This was a new idea. In 1916 we let contracts at various prices. Some would be higher than others. In some parts of the country we would let a contract at a price which would be higher than the price in another part of the country.

Mr. GARRETT. What has been the average price during the last five years?

Col. BRISTOL. I should say it was less than \$165. I am not quite certain about that. About two years ago the average price was about \$147.

Mr. GARRETT. A little less than \$150?

Col. BRISTOL. Yes, sir.

Mr. GARRETT. In fixing this confidential price, do you take into consideration the cost of the production of a horse of that character to the farmer?

Col. WILLIAMS. We took into consideration chiefly the prices that animals had sold at for war purposes since the beginning of the war.

Mr. GARRETT. In all of the other supplies that the Quartermaster Department is using, that you buy from contractors, it has been testified here you take into consideration the cost of production, that you figure that out and allow the men approximately about 10 per cent on these huge contracts that they get. What I want to get at is what figures have you made on the cost of the production of a horse?

Col. BRISTOL. I do not believe it would be possible to estimate the cost of producing a horse that we would take into the service accu-

rately enough to base our estimates on that calculation. The horse has been used by the owner, it has been used as a work horse before we got it, and while the cost of his keep would be greater now, the price of his labor or work would also be greater. That is to say, if it costs more to feed the horse, the work that may be done by the horse would be worth more.

Mr. GARRETT. As a matter of fact, it costs more than twice as much to feed a horse now than it did two years ago; is not that your experience?

Col. BRISTOL. Not twice as much.

Mr. GARRETT. How much does it lack of being twice as much? Two years ago, what were corn and oats selling for?

Col. BRISTOL. I should say it would cost about 50 per cent more.

Mr. OLNEY. As a matter of fact, you are unable to secure horses in New England for Camp Devens or Camp Upton? You do not secure horses there for those camps, but you have to go to the Middle West and the far West?

Col. BRISTOL. The country is divided up into purchasing zones, and of course New England is a part of the eastern zone, with headquarters at Front Royal. Our contracts are let throughout the East for the eastern zone, and our purchasing boards move around through the eastern zone to every place at which they can get animals.

Mr. OLNEY. Do you get horses from Canada?

Col. BRISTOL. No, sir.

Mr. GARRETT. Somebody spoke of calling for a fixed number of horses in a certain time. Is there anything to keep the Government from going out and commandeering the horses? If you need 250,000 horses, have you not the power, under the authority granted to the President, to go out and commandeer all the horses you need, and take charge of them just as easily as the Government can take charge of the railroads?

Col. WILLIAMS. How are you going to get suitable animals?

Mr. GARRETT. You can order people to bring their horses in and let you select them, or you can send men through the country to take them, can you not?

The CHAIRMAN. Where is the authority for that? Section 120 of the national defense act only applies to manufacturers.

Mr. GARRETT. Has anybody ever questioned the power of the Government to go out and buy horses?

Mr. FIELDS. Would it not be better to let the dealer go to the farmer than to send a Government agent to some farmer who does not want to part with his horses?

The CHAIRMAN. This method of purchasing horses is a matter of regulation and not a matter of statute?

Col. BRISTOL. It is a matter of regulation.

The CHAIRMAN. I think that is a matter we might take up as a question of policy when we come to pass on this bill. We know what the facts are now.

Gen. SHARPE. I would like to state in reference to the matter of buying articles, as it was explained, when you buy articles which are manufactured, such as canned goods products, and articles of that kind, the price is fixed on them, but we always buy whenever we can below that price. Anyone can come in who wants to deliver anything and sell it to us lower than the price which has been fixed,

which the packer is obliged to furnish at that price. If anybody wants to furnish those articles at less than the price we fix, we take them.

Mr. GARRETT. That would be the same in reference to horses?

Gen. SHARPE. That is another section, 120. We have not authority of law for the other.

Mr. KAHN. Some years ago this committee reported legislation, which I believe the Congress adopted, and which was approved, to the effect that the Government, at the remount stations should have a certain number of stallions to serve mares. Do you know, Colonel, whether that law was ever put into effect, and does the Government now own stallions to serve mares?

Col. BRISTOL. Yes, sir; the Agricultural Department have some stallions at Front Royal.

Mr. KAHN. That is at an Army depot?

Col. BRISTOL. At the remount station. They are in the town of Front Royal, near the remount station there. Those stallions are used during the season, and the offspring, when they are 3 years old, are bought, if the owner cares to part with them, at \$150 each, and in that way we encourage the breeding of animals that are very useful to us. But as a general rule, unfortunately, a great many of them have been not altogether too satisfactory. The best of them, perhaps, we do not get.

Mr. KAHN. The owner will not take——

Col. BRISTOL (interposing). The owner prefers to keep them; the others, of course, we get. In order to encourage them, we take a lot we would not buy if it were not for that fact.

Gen. SHARPE. The owner is allowed to keep the horse if he pays the service price.

Mr. GORDON. Does he pay anything for the service of the stallion?

Col. BRISTOL. He pays \$25 if he keeps the horse.

Mr. KAHN. But if he sells the horse to the Government that is remitted to him? Do you think the system is proving sufficiently successful to warrant the Government going into it still further?

Col. BRISTOL. I think it should be encouraged, whether it has been successful or not. I do not think it would be advisable to give up the idea. I think our remount system would be improved, provided we would have enough stallions at each one of the remount stations to breed satisfactory animals, because now at the present time, what we consider a suitable Cavalry horse is very scarce. They are very scarce throughout the country, everywhere.

Mr. KAHN. As I recall, quite a number of gentlemen who were interested in the matter donated some blooded stallions for the purpose of breeding.

Col. BRISTOL. Yes, sir; they did.

Mr. KAHN. Has the Government bought any stallions?

Col. BRISTOL. I am not certain about that.

Gen. SHARPE. I think one of the things most needed is the proper selection of mares which are to be bred.

Mr. KAHN. Has the department made any recommendation along that line?

Gen. SHARPE. No, sir; that is in control of the farmers.

Mr. KAHN. It is not in your department?

Gen. SHARPE. No, sir. While we are on this matter, I want to refer to one of the questions you were asking about the number of

horses shipped out of the country. It has become necessary to try to curtail the number of shipments of brood mares out of the country, because we will be in a serious condition if the shipment of brood mares is continued, and we will not have animals to produce the horses that we require.

Mr. KAHN. So far as your purchasing is concerned, do you try to avoid, as far as you can, the purchase of mares?

Col. BRISTOL. Yes, sir, and we have tried to get the British and the French also to reduce, as far as possible, the number of mares which they are buying.

Mr. KAHN. Have you met with any success in that direction?

Col. BRISTOL. Yes, sir, some success.

Mr. KAHN. Are they still buying draft animals over here in any quantity?

Gen. SHARPE. I think they are buying both.

Col. BRISTOL. The British are buying here. We have an agreement with them that they will not pay a higher price than we pay, and that they will not buy mares any more than we do.

Mr. KAHN. That agreement is working satisfactorily?

Col. BRISTOL. Quite satisfactorily.

Mr. SHALLENBERGER. You said, as I understood you, that you are operating now in conjunction with the allies to fix the price upon the horses; if we were not in the market, the price would probably be lower?

Col. BRISTOL. Yes, sir.

Mr. SHALLENBERGER. Therefore it is essential that you fix a fair price at which these horses can be purchased; does that not follow? Is not the Government bound to fix a price which is fair to the producer, and which will result in the production which the country will need in the future?

Col. BRISTOL. Yes, sir, I think so. I mean to say that the price of the horse would be lower, and that the farmer would get even less than he gets now.

Mr. SHALLENBERGER. There are three things that I think are most essential for the people of the country, especially at this time, which the farmer produces, one is wheat, the other is hogs, and the last is horses. We fixed the price for wheat arbitrarily. Last year the production of wheat was less than it was before. This year it was less again, and we know now that under the price the Government has fixed for wheat, the production of wheat is going down, because in my opinion the Government has fixed a price that the farmer will not raise the wheat for.

We also know that there is going to be a decrease in the number of hogs, instead of an increase, because the farmer can not produce them at the price he gets, since it does not cover his cost of production. We know there is not going to be an increase in the production of hogs or wheat.

Is it not likely that because of the fact that the Government has fixed a price for horses, at which the farmer can not produce them and sell them at a profit, that before the war is over you are not going to get the horses that the Government needs?

Col. BRISTOL. The contractors with whom I have talked all agree that there are plenty of horses.

Mr. SHALLENBERGER. Will the farmer go on to produce horses, under the conditions that confront us now, and sell them at the price

you have fixed? Can he afford to do it? If he knows that if he keeps the horse until he is old enough for the Government to buy him, it is going to cost him so much more to raise the horse, do you think the farmer will go on and produce the number of horses that the Government ought to have?

Col. BRISTOL. I think he will, because there are other uses for the horse. There is no other use for the hog. The man who owns the horse works him on his farm, and still he has the horse available for sale, at a certain age.

Mr. SHALLENBERGER. I understood you to say you could not get the horses you need by the method of purchasing directly from the farmers. If you raised the prices of horses, as the price has been raised on everything else which the Quartermaster's Department buys, do you not think you would have the horses coming much faster than you have them now? If you doubled the price of the horses, and paid the farmer twice as much, do you think you could get them much faster? Does it not inevitably follow that if you raise the price you pay for a commodity you get the commodity more rapidly than otherwise, if there is a surplus?

Col. BRISTOL. I suppose that is true, but I think now the farmer is quite satisfied with the price he gets.

Mr. SHALLENBERGER. You think he will breed the horses at that price? That is not my experience in Nebraska. There the farmer is not breeding horses because he can make more money by feeding the stuff he might feed to the horses to the hogs and the cattle. The horses are the least profitable thing that he raises.

Col. BRISTOL. We find we can get them.

Mr. SHALLENBERGER. But it takes six years to grow the horses that you buy, and you have only been in the business buying horses about a year. If the farmer finds it is impossible to produce the horses, as it is in France and England now, you will not get the horses you need, will you?

Col. BRISTOL. If it keeps up long enough, I suppose we will get rid of all the horses.

Mr. SHALLENBERGER. If you buy horses from the farmers and pay them prices at which they lose money, will they not quit breeding them?

Col. BRISTOL. I think probably so, if they lose money.

Mr. KAHN. If the farmer does raise wheat at \$2 a bushel, which I take it to be a good price, because I remember when wheat was selling at 65 and 70 cents, what product is he going to grow on his land that will give him a greater profit?

Mr. SHALLENBERGER. He will grow corn right now.

Mr. GARRETT. At the time they fixed the price of wheat at \$2, it was \$3.25 in the market.

Mr. HULL. Did I understand you to say that the Government has fixed the price on hogs?

Mr. SHALLENBERGER. It has an agreed price, that they shall not go below \$15 at Chicago, and under that inspiration the farmers have not responded to it, notwithstanding the fact that a great appeal has been made to increase the production of hogs at least 15 per cent, but instead of having that increase, the figures now show that the number of hogs will not be increased, and that probably there will be less next year than the year preceding, because the prices of other things

are so high that the farmer will sell other things rather than produce hogs. If the price had been fixed at \$20 a hundred, the farmers would probably have increased the production.

The question is whether if we do not pay a profitable price for the horses we will not run out of horses. I do not think we are paying a price at which the farmers will produce the horses.

Mr. GARRETT. I want to inquire about the zones you talked about. How many of the purchasing zones have you, and how large are they?

Col. BRISTOL. I can not give you that in detail just at this time.

Mr. GARRETT. Can you put that in the hearings, the number of the purchasing zones, and their extent?

Col. WILLIAMS. Yes, sir.

Mr. QUIN. Colonel, is there not a distinction between what Gov. Shallenberger has referred to in the matter of fixing the prices of wheat and hogs, and fixing the prices of horses? The Government has not fixed any price for horses, has it?

Col. BRISTOL. The Government has not fixed a price, except by the contracts.

Mr. QUIN. There is no fixed price by law, nor by any administrator?

Col. BRISTOL. No, sir.

Mr. QUIN. Or by any body connected with the Government?

Col. BRISTOL. No, sir; except the War Department.

Mr. QUIN. Of course, the War Department fixes a maximum that it will pay for a certain type of horse. If the contractor or the farmer does not want to take that price, there is no way for the Government to force him to take it, is there?

Col. BRISTOL. No, sir. I might add that we started at that time with the idea of establishing a price of \$160. If we had found that the contractors would not buy for that price, of necessity we would have raised that price.

Mr. QUIN. The truth of the matter is that the Government, buying all the horses, is letting them bring their value to the farmer. If the Government did not buy these 500,000 horses, there would be a surplus of horses in the market of the United States?

Col. BRISTOL. I would think so.

Mr. QUIN. And the fact that the Government is the largest buyer of horses and has fixed a maximum price, gives the market to the farmers for all the surplus horses they produce?

Col. BRISTOL. I think so.

Mr. QUIN. It seems to me that it is beneficial to the farmer and to the Government, as the purchaser of the farmer's horses, and if the farmer does not want to take that price for his horse, it is his business to sell it to some private customer.

Col. WILLIAMS. If he can get more for it.

Mr. QUIN. I can not see how it would hurt any farmer.

Mr. MORIN. I see in this item that the average price of the draft mule is \$210. Do the mules cost more than the horses?

Col. BRISTOL. We have a heavy draft horse that costs as much as the biggest mule. As a rule the mules cost more than the horses. The big heavy draft mule is beginning to be a very scarce animal.

Mr. MORIN. You are speaking of Cavalry horses?

Col. BRISTOL. More of the Cavalry horse.

Mr. DAVIDSON. I wanted to follow the subject to this extent, and ask you to what extent has the purchase of automobiles by the farmers affected the horse market, and the use of horses in farming?

Col. BRISTOL. I do not know. I have heard that in some localities they say the automobile is running the horse out; but in others it does not seem to have made much difference.

Col. WILLIAMS. It has made the light horse of less value to the farmer.

Mr. KAHN. In the West, where they used to farm very large areas with a horse and plow—they had probably ten horses attached to a big plow—they now plow those lands with tractors. You see the tractors coming along and doing all the plowing in those big areas. It has practically made the horse absolutely valueless in those neighborhoods. Has that not had something to do with the breeding of horses?

Col. WILLIAMS. I think it has.

Mr. HULL. I want to ask you this question: There can be no monopoly in the sale of these horses, can there, from the fact that you will do business with anyone who has 20 horses?

Col. BRISTOL. Yes, sir; a carload.

Mr. HULL. And the buyer can sell to you in that way, or the farmer, or any association of farmers?

Col. BRISTOL. Any person who cares to get together 20 animals.

Mr. HULL. What do you do in case a man notifies you that he has 20 horses and then you find he has only ten?

Col. BRISTOL. We, as a rule, can not buy less than a carload lot. If he makes an agreement to get 20 horses, he makes the same kind of an agreement as the man who agrees to get 5,000 horses; he agrees to get them together. That is our trouble in this method of purchasing. We go to a place and a farmer has said he would get together 20 horses, and he probably does have 20 horses, but when we get there there may be only 2 or 3 which are fit for our purposes.

Mr. HULL. Then you can not do business?

Col. BRISTOL. Then we can not do business.

Mr. HULL. You will give him a chance to deal with you, if he will bring in the horses?

Col. BRISTOL. Yes, sir.

Mr. GARRETT. Is it your understanding that there is a surplus of these animals in the United States now?

Col. BRISTOL. Not a surplus, but we seem to have plenty of horses; the mules are getting very scarce.

Mr. GARRETT. Is it not true that the standard of the Cavalry horse is not as high as it was 5 or 10 years ago, and you have not anything like the quality of horse that you had before; that is, so far as his appearance and qualities go?

Col. BRISTOL. I do not think they are as good now as they were five years ago.

(The details of the estimate are as follows:)

Horses for Cavalry, Artillery, and Engineers.

Deficiency act, June 15, 1917.....	\$25, 000, 000
Deficiency act, Oct. 6, 1917.....	40, 000, 000
Total.....	65, 000, 000

Estimate—Horses for Cavalry, Artillery, Engineers, etc., United States and Philippine Islands.

RECAPITULATION.

Item No.	Purpose.	Appropriation, fiscal year 1918.	Estimate, fiscal year 1919, current requirements.	Estimate per capita 1,712,245 officers and enlisted men.
269	Horses for remounts.....	\$105, 000	\$150, 000	\$0. 0876
270	Horses for officers entitled to public mounts.....		1, 696, 680	. 9857
271	Horses for Cavalry.....		2, 972, 480	. 1738
272	Horses for the Artillery.....		18, 078, 980	. 1558
273	Horses for the Signal Corps.....		657, 500	. 3839
274	Horses for the Engineers.....		645, 590	. 377
275	Horses for the United States Military Academy.....		11, 920	. 00695
276	Horses for service schools and staff colleges.....		10, 395	. 00607
277	Horses for Indian Scouts.....			
278	Horses for Infantry, mounted.....		1, 074, 955	. 627
279	Horses for the Hospital Corps, mounted.....		288, 260	. 1672
280	Expenses incident to purchase.....	800	397, 168	. 232
281	Hire of employees.....	327, 600	31, 120	. 01817
	Horses for train headquarters and military police.....		1, 069, 200	. 6214
	Horses for ammunition trains.....		1, 673, 715	. 9716
	Total.....	433, 400	28, 755, 991	1. 81699

UNITED STATES.

Item No.	Purpose.	Appropriation, fiscal year 1918.	Estimate, 1919, current requirements.
269	Horses for remounts.....	\$105, 000	\$150, 000
270	Horses for officers entitled to public mounts.....		1, 692, 900
271	Horses for the Cavalry.....		2, 922, 480
272	Horses for the Artillery.....		18, 075, 480
273	Horses for the Signal Corps.....		656, 100
274	Horses for the Engineers.....		645, 270
275	Horses for the United States Military Academy.....		11, 920
276	Horses for service schools and staff colleges.....		10, 395
277	Horses for Indian Scouts.....		
278	Horses for Infantry, mounted.....		1, 072, 995
279	Horses for the Hospital Corps, mounted.....		285, 780
280	Expenses incident to purchase.....	800	396, 968
281	Hire of employees.....	327, 600	31, 120
	Horses for train headquarters and military police.....		1, 069, 200
	Horses for ammunition trains.....		1, 673, 745
	Total.....	433, 400	28, 694, 351

PHILIPPINE ISLANDS.

269	Horses for remounts.....		
270	Horses for officers entitled to public mounts.....		\$3, 780
271	Horses for the Cavalry.....		50, 000
272	Horses for the Artillery.....		3, 500
273	Horses for the Signal Corps.....		1, 400
274	Horses for the Engineers.....		320
275	Horses for the United States Military Academy.....		
276	Horses for service schools and staff colleges.....		
277	Horses for Indian Scouts.....		
278	Horses for Infantry, mounted.....		1, 960
279	Horses for the Hospital Corps, mounted.....		480
280	Expenses incident to purchase.....		200
281	Hire of employees.....		
	Horses for train headquarters and military police.....		
	Horses for ammunition trains.....		
	Total.....		61, 640

Item H. C. A. & E.-269—Horses for remount.

[Estimate, fiscal year 1919, \$150,000.]

	United States.			Philippine Islands.			Grand total.
	Current re-quirements.	New con-struction.	Total.	Current re-quirements.	New con-struction.	Total.	
Estimate.....	\$150,000.00	.....	\$150,000.00	.....	.....	.....	\$150,000.00
Appropriated, fiscal year 1918.....	105,000.00	.....	105,000.00	.....	.....	.....	105,000.00
Expended, fiscal year 1917.....	81,750.50	.....	81,750.50	.....	.....	.....	81,750.50

REMARKS.

United States.—The amount estimated for under this item is required for the purpose of purchasing approximately 1,000 young horses at \$150 each (\$150,000), which have been bred under agreement with the Department of Agriculture (copy herewith).

Farmers and breeders have bred these horses for the military service by utilizing their best mares and Government-owned stallions, and as these young horses are of high class and particularly suitable for military purposes, it is to the interests of the Government to purchase them. This action will encourage farmers and breeders to continue to breed horses suitable for the Army.

AGREEMENT.

This agreement, made and entered into , 191.., by and between , for and on behalf of the United States of America, party of the first part, and , of , State of , party of the second part:

Whereas, the parties hereto desire to breed horses suitable for the use of the United States Government, now this agreement witnesseth:

First. The party of the first part does hereby promise and agree as follows: To furnish the service of the stallion for the mare , of the party of the second part, during the season of 191.., and to repeat the service of the said stallion during the same breeding season in the event that the said mare fails to prove in foal after the first service.

Second. The party of the second part does hereby promise and agree as follows: In consideration of the service of said stallion, as hereinbefore provided, to grant, to the United States of America an option, in the event of an appropriation being made available for that purpose by Congress, to purchase, for the sum of \$....., the resulting foal at any time during the year the same is three years old, it being understood that a horse is 1 year of age on the first day of January next following after it is foaled: *Provided*, That the party of the second part shall have the right, in lieu of granting the option hereinbefore mentioned, to pay a service fee of \$..... at any time before the option of the party of the first part is exercised, after which no service fee shall be exacted.

Third. It is further mutually understood and agreed by and between the parties hereto as follows:

1. That in case the party of the second part should sell the mare or the resulting foal the party of the second part shall pay to the party of the first part the sum of \$25 as a service fee: *Provided*, That such sum shall not become due and payable if satisfactory evidence is furnished to the party of the first part that said mare did not produce a live foal: *And provided further*, That such sum shall not become due and payable on the in-foal mare, if sold, or on the resulting foal if sold before weaning time, if the party purchasing the in-foal mare, or the mare and resulting foal, agrees in writing to assume the obligations of the party of the second part under this agreement.

2. That the party of the first part shall, upon the request of the party of the second part, waive its option on a filly foal bred and foaled under the provisions of this agreement and charge no service fee for the same: *Provided*, That such filly foal is sound, and a desirable type for breeding purposes. The examination of a filly for this privilege will be made by the inspecting officer when said filly is presented for the Gov-

ernment's option. A filly so retained by the owner will be given a number in the Remount Brood Mare Register and a certificate of breeding will be issued by the Government to the owner without charge.

3. That under the provisions of paragraph 1 of this agreement, the party of the second part will notify the Chief of the Bureau of Animal Industry of the Department of Agriculture, Washington, D. C., promptly in advance of any sale of a mare or foal; the party of the second part further agrees to notify the Chief of the Bureau of Animal Industry of the said Department of Agriculture promptly of the result of the service provided under this agreement, upon forms to be furnished by said Department of Agriculture.

4. That this agreement shall be assigned in whole or in part; that no Member of or Delegate to Congress, or Resident Commissioner, after his election or appointment, and either before or after he has qualified and during his continuance in office, and no officer, agent, or employee of the Government shall be admitted to any share or part of this contract or agreement, or to any benefit arising thereupon. Nothing, however, herein contained shall be construed to extend to any incorporated company, where such contract or agreement is made for the general benefit of such incorporation or company (sec. 3741, R. S., secs. 114-116, act Mar. 4, 1909).

In testimony whereof, the parties hereto have executed this agreement on the day, month, and year first above written.

.....
The United States of America, party of the first part.

Witness:
.....

.....
Party of the second part.

Witnesses:
.....
.....

Item H. C. A. and E. 270—Horses for officers entitled to public mounts.

[Estimate, fiscal year 1919, \$1,696,680.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$1,692,900	.....	\$1,692,900	\$3,780	.....	\$3,780	\$1,696,680
Appropriated, fiscal year 1918.....	.....	.....	.....	.....	.....	.....	.....
Expended, fiscal year 1917.....	499,320	.....	499,320	3,780	.....	3,780	503,100

REMARKS.

United States.—Four hundred and fifty-six mounts are authorized in Tables of Organization, 1917, for officers with an Infantry division. For 45 divisions 20,520 mounts are authorized. Should the present emergency continue it is considered that 50 per cent of this allowance will be required to replace wastage that will occur in the field during actual campaign, or 10,260 horses, at \$165, costing \$1,692,900.

Philippine Islands.—The sum of \$3,780 was estimated for by the department authorities, Philippine Department.

Item H. C. A. & E. 271—Horses for the Cavalry.

[Estimate, fiscal year 1919, \$2,972,480.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$2,922,480.00	.....	\$2,922,480.00	\$50,000.00	.....	\$50,000.00	\$2,972,480.00
Appropriated, fiscal year 1918.....	.....	.....	.....	.....	.....	.....	.....
Expended, fiscal year 1917.....	2,222,553.25	.....	2,222,553.25	55,100.00	.....	55,100.00	2,277,653.25

REMARKS.

United States.—The amount needed under this item, should the present war continue, is as follows:

The maximum allowance of Cavalry horses for troops stationed in the United States, Hawaii, and the Canal Zone organized under the provisions of Tables of Organization, May, 1917, is 1,476 per regiment, or 35,424 for 24 regiments of Cavalry now in the service, excluding 1 regiment stationed in the Philippines.

It is considered that 50 per cent of this allowance will be needed to replace wastage that will occur should the present war continue during the fiscal year 1919, amounting to 17,712 horses, at \$165 per head, costing \$2,922,480.

Philippine Islands.—This estimate is based on figures submitted by the department authorities, Philippine Department.

Item H. C. A. & E. 272—Horses for the Artillery.

[Estimate, fiscal year 1919, \$18,078,990.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$18,075,480.00	.....	\$18,075,480.00	\$3,500.00	.....	\$3,500.00	\$18,078,980.00
Appropriated, fiscal year 1918.....	.....	.....	.....	.....	.....	.....	.....
Expended, fiscal year 1917.....	4,501,765.50	.....	4,501,765.50	3,500.00	.....	3,500.00	4,505,265.50

REMARKS.

United States.—The maximum allowance of Artillery horses for Artillery organizations with 45 Infantry divisions is as follows:

Allowance for one division, 3,059 light artillery horses, or 137,655 for 45 divisions.

Allowance of heavy draft artillery horses for one division, 962, or 43,290 for 45 divisions.

To replenish such wastage as will occur in the field, should the present war continue during the fiscal year 1919, it is estimated that 50 per cent of the foregoing allowance will be required, amounting to:

68,827 light Artillery horses, at \$190..... \$13,097,130
 21,645 heavy draft Artillery horses, at \$230..... 4,978,350

18,075,480

Philippine Islands.—\$3,500 is the amount estimated for by the department authorities, Philippine department.

Item H. C. A. & E. 273—Horses for the Signal Corps..

[Estimate, fiscal year 1919, \$657,500.]

	United States.			Philippine Islands.			Grand total.
	C. R.	N. C.	Total.	C. R.	N. C.	Total.	
Estimate.....	\$656,100	.....	\$656,100	\$1,400	.....	\$1,400	\$657,500
Appropriated, fiscal year, 1918.....	.....	.....	.....	.....	.....	.....	.....
Expended, fiscal year, 1917.....	257,750	.....	257,750	1,450	.....	1,450	259,200

REMARKS.

United States.—The maximum allowance of horses for Signal Corps organizations with an Infantry division, organized in accordance with Tables of Organization, 1917, is 156 riding horses and 18 draft horses. The allowance for 45 divisions amounts to

7,020 riding horses and 810 draft horses. It is estimated that 50 per cent of this allowance will be necessary to replace such animals as will become unserviceable during the fiscal year 1919 should the present war continue, requiring:

3,510 riding horses, at \$165 each, amounting to.....	\$579, 150
405 draft horses, at \$190 each, amounting to.....	76, 950
Total.....	656, 100

Philippine Islands.—\$1,400 is the amount estimated for by the department authorities, Philippine department.

Item H. C. A. and E. 274—Horses for the Engineers.

[Estimate fiscal year 1919, \$645,590.]

	United States.			Philippine Islands.			Grand total.
	Current re-quirements.	New con-struction.	Total.	Current re-quirements.	New con-struction.	Total.	
Estimate.....	\$645,270.00	.....	\$645,270.00	\$320.00	.....	\$320.00	\$645,590.00
Expended fiscal year 1917.....	203,000.00	.....	203,000.00	400.00	.....	400.00	203,400.00

REMARKS.

United States.—The maximum allowance of horses for Engineer organizations with 45 Infantry divisions, organized under the provisions of tables of organizations 1917, is as follows:

Riding horses.....	1, 395
Draft horses.....	5, 580

It is estimated that 50 per cent of this allowance will be needed during the fiscal year 1919, should the present emergency continue, to replace wastage that will occur requiring:

698 riding horses, at \$165.....	\$115, 170
2,790 draft horses, at \$190.....	530, 100
Total.....	645, 270

Philippine Islands.—Three hundred and twenty dollars is the amount estimated for by the department authorities, Philippine Department.

Item H. C. A. and E. 275—Horses for the United States Military Academy.

[Estimate fiscal year 1919, \$11,920.]

	United States.			Philippine Islands.			Grand Total.
	Current re-quirements.	New con-struction.	Total.	Current re-quirements.	New con-struction.	Total.	
Estimate.....	\$11,920	.....	\$11,920	.....	.....	.....	\$11,920
Expended fiscal year 1917.....	9,840	.....	9,840	.....	.....	.....	9,840

REMARKS.

United States.—Based on an allowance of 200 Cavalry and 140 Artillery horses for the detachment at West Point, authorized by the Secretary of War on October 20, 1914 (A. G. O. No. 2145188) and considering the life of usefulness of horses at the United States Military Academy at five years, it will require the replacing of one-fifth of this allowance during the fiscal year 1919, or 40 Cavalry horses at \$165 each and 28 Artillery horses at \$190 each, amounting to \$11,920.

Item H. C. A. and E. 276—Horses for service schools and staff colleges.

[Estimate fiscal year 1919, \$10,395.]

	United States.			Philippine Islands.			Grand Total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$10,395	.....	\$10,395	.....	.....	.....	\$10,395
Expended fiscal year 1917.....	24,000	.....	24,000	.....	.....	.....	24,000

REMARKS.

United States.—The allowance of horses for the service schools and staff colleges is as follows:

Name of school.	Authority for allowance.	Number of horses.
Army War College, Washington, D. C.....	Approval, Secretary of War, dated Apr. 30, 1910 (A. G. O. No. 1636104) and Oct. 2, 1912 (A. G. O. No. 1899867-B).	70
Army Service School, Fort Leavenworth, Kans.....	A. G. O. indorsement, dated Feb. 7, 1912 (No. 1870475).	129
Coast Artillery School, Fort Monroe, Va.....	A. G. O. indorsement, dated Oct. 13, 1910 (No. 1658860).	15
School of Musketry, Fort Sill, Okla.....	A. G. O. indorsement, dated May 28, 1915 (No. 2291195).	50
School of Fire, Fort Sill, Okla.....	A. G. O. indorsement, dated May 8, 1911 (No. 1762422).	50
Total.....	.....	314

It is estimated that the life of usefulness of horses at service schools and staff colleges is 5 years, requiring one-fifth replenishment for the fiscal year 1919, or 63 riding horses at \$165 each, amounting to \$10,395.

Item H. C. A. and E. 277—Horses for Indian scouts, no estimate.

Item H. C. A. and E. 278—Horses for Infantry, mounted.

[Estimate fiscal year 1919, \$1,074,955.]

	United States.			Phillipine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$1,072,995.00	.....	\$1,072,995.00	\$1,960	.....	\$1,960.00	\$1,074,955.00
Appropriated, fiscal year 1918.....	.....	.....	.....	.....	.....	.....	.....
Expended, fiscal year 1917.....	762,170.00	.....	762,170.00	9,730.00	.....	9,730.00	771,900.00

REMARKS.

United States.—The authorized allowance of riding horses for Infantry regiments with 45 Infantry divisions organized in accordance with the Tables of Organization 1917, is 13,005. Fifty per cent replenishment of this allowance will be needed during the fiscal year 1919 should the present emergency continue, requiring 6,503 riding horses at \$165 each, amounting to \$1,072,995.

Philippine Islands.—One thousand nine hundred and sixty dollars is the amount estimated for by the department authorities, Philippine Department.

Item H. C. A. and E. 279—Horses for the Hospital Corps, mounted.

[Estimate fiscal year 1919, \$286,260.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$285,780.00	.....	\$285,780.00	\$480.00	.....	\$480.00	\$286,260.00
Appropriated, fiscal year 1918.....							
Expended, fiscal year 1917.....	141,465.00	.....	141,465.00	435.00	.....	435.00	141,900.00

REMARKS.

United States.—The authorized allowance of riding horses for the Hospital Corps organizations with 45 Infantry divisions is 3,465. Fifty per cent of this allowance will be needed to replenish horses that will become unserviceable should the present emergency continue, requiring 1,732 riding horses, at \$165 each, amounting to \$285,780.

Philippine Islands.—Four hundred and eighty dollars is the amount estimated for by the department authorities, Philippine Department.

Item H. C. A. and E. 280—Expenses incident to purchase.

[Estimate fiscal year 1919, \$397,166.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$396,966.00	.....	\$396,966.00	\$200.00	.....	\$200.00	\$397,166.00
Appropriated fiscal year 1918.....	800.00	.....	800.00				800.00
Expended fiscal year 1917.....	1,530.75	.....	1,530.75	100.00	.....	100.00	1,630.75

REMARKS.

United States.—This amount will be needed to pay the hire of attendants to accompany animals from place of purchase to their destination, and pay other expenses incident to the purchase of animals estimated for in this estimate.

Philippine Islands.—Two hundred dollars is the amount estimated for by the department authorities, Philippine Department.

Item H. C. A. and E. 281—Hire of employees.

[Estimate fiscal year 1919, \$31,120.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$31,120.00	.....	\$31,120.00	.....	.....	.....	\$31,120.00
Appropriated fiscal year 1918.....	327,600.00	.....	327,600.00	.....	.....	.....	327,600.00
Expended fiscal year 1917.....	36,000.00	.....	36,000.00	.....	.....	.....	36,000.00

REMARKS.

United States.—This amount is estimated for to cover the hire of the following employees at remount depots:

1 cook, at \$600.....	\$600
2 range riders, at \$600.....	1,200
2 assistant range riders, at \$540.....	1,080
15 stablemen, at \$480.....	7,200
1 trainer (chief), at \$1,000.....	1,000
10 trainers, at \$600.....	6,000
8 trainers, at \$480.....	3,840
2 trainers, at \$420.....	840
15 assistant trainers, at \$540.....	8,100
3 waiters, at \$420.....	1,260

59 employees at a total cost of..... 31,120

Horses for train headquarters and military police.

[Estimate, fiscal year 1919, \$1,069,200.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$1,069,200	.....	\$1,069,200	.....	.....	.....	\$1,069,200
Appropriated fiscal year 1918.....	.....	.....	.....	.....	.....	.....	.....
Expended fiscal year 1917.....	.....	.....	.....	.....	.....	.....	.....

REMARKS.

United States.—Tables of Organization, series A, August, 1917, authorizes an allowance of 288 riding horses for train headquarters and military police, for one Infantry division, or 12,960 horses for 45 Infantry divisions. If this organization is continued in the service during the fiscal year 1919, 50 per cent of this allowance to replenish wastage will be needed, or 6,480 horses at \$165, amounting to \$1,069,200.

Horses for ammunition trains.

[Estimate, fiscal year 1919, \$1,673,745.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$1,673,745.00	.....	\$1,673,745.00	.....	.....	.....	\$1,673,745.00
Appropriated, fiscal year 1918.....	.....	.....	.....	.....	.....	.....	.....
Expended, fiscal year 1917.....	.....	.....	.....	.....	.....	.....	.....

REMARKS.

United States.—Tables of Organization, series "A," August, 1917, authorize an allowance of 133 riding horses and 276 draft horses (Artillery type) for ammunition trains with each Infantry division, or a total of 5,985 riding horses and 12,420 draft horses for ammunition trains with 45 Infantry divisions. If these units are continued during the fiscal year 1919, 50 per cent of this allowance will be needed to replenish such animals as may become unserviceable during field operations, amounting to—

2,993 riding horses, at \$165.....	\$493,845
6,210 draft horses, at \$190.....	1,179,900

Total..... 1,673,745

Classification.	Number contracted for Apr. 1 to Nov. 25, 1917.	Number delivered Apr. 1 to Oct. 31, 1917.	Number due under contracts Nov. 25, 1917.	Average unit price.	Total cost.
Cavalry horses.....	50,416	32,564	17,852	\$165.91	\$8,364,683.50
Light-artillery horses.....	90,827	50,329	40,498	189.76	17,235,412.00
Heavy-artillery horses.....	5,480	2,636	2,844	220.24	1,206,945.00
Wheel mules.....	41,281	24,140	17,141	229.28	9,465,023.00
Lead mules.....	50,566	26,892	23,674	189.67	9,591,127.00
Pack mules.....	8,729	5,733	2,996	184.22	1,608,119.00
Grand total.....					47,471,309.50

On July 6 the estimates branch submitted a memorandum to the remount division requesting that a deficiency estimate be prepared to cover deficiencies for a force of 55,042 officers and 2,033,345 enlisted men. The \$40,000,000 appropriated under the act of October 6, 1917, was intended to cover the requirements of this estimate. So far arrangements have been made to purchase horses for only 16 National Guard and 16 National Army divisions, 32 in all. Nineteen thousand three hundred and twenty-two light-artillery horses have not yet been contracted for to equip these 32 divisions and contracts for these animals will be awarded within a short time.

These animals will cost \$190 per head, or a total of..... \$3,671,180

The force upon which deficiency estimates was based comprises approximately 65 Infantry divisions. As only arrangements have been made to purchase horses for 10 Regular Army divisions, 16 National Guard and 16 National Army divisions, 42 in all, 23 Infantry divisions still remain to be equipped with horses. To provide horses for these 23 divisions the following funds will be needed:

74,083 light-artillery horses, at \$190 each.....	14,075,770
22,126 heavy-artillery horses, at \$230 each.....	5,088,980
31,096 Cavalry horses, at \$165 each.....	5,130,840

The following animals will be needed to replace those that have so far died and been destroyed at auxiliary remount depots which were bought for the 16 National Guard, and 16 National Army divisions:

742 Cavalry, at \$165 each.....	122,430
1813 Artillery, at \$190 each.....	344,470

Required for replenishing animals for the 10 Regular Army, 16 National Guard and 16 National Army divisions:

11,424 Cavalry horses, at \$165 each.....	1,884,960
27,090 light-artillery horses, at \$190 each.....	5,147,100

Total.....	35,465,730
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ARMY APPROPRIATION BILL, 1919.

COMMITTEE ON MILITARY AFFAIRS,
HOUSE OF REPRESENTATIVES,
January 16, 1918.

STATEMENT OF MAJ. GEN. HENRY G. SHARPE, QUARTERMASTER GENERAL, ACCOMPANIED BY BRIG. GEN. I. W. LITTELL, LIEUT. COL. M. C. BRISTOL, AND LIEUT. COL. R. H. WILLIAMS, QUARTERMASTER CORPS.

BARRACKS AND QUARTERS.

The CHAIRMAN. The next item is, "Barracks and quarters, \$26,839,967." Under this item at the last session of Congress you got appropriations amounting to \$99,758,314.20.

Gen. SHARPE. We got that amount under two appropriations, Mr. Chairman. In the act of June 15, Congress gave us \$47,603,314, and the appropriation act of October 6 gave us \$49,155,000.

I would like to say that the estimates for the appropriation of October 6 was \$84,335,000, while the appropriation as passed was a reduction of that estimate by \$35,185,000.

I have a table showing the various items of the appropriation and the various amounts required for current requirements and new construction, and the total of these estimates. This appropriation is based on practically 3,000,000 men.

The CHAIRMAN. This is for 3,000,000 men?

Gen. SHARPE. It is for 2,952,000 men.

The CHAIRMAN. You will put in the record a detailed statement in reference to each item, and the amount you have expended under the appropriation you got last year, and what has been obligated.

Gen. SHARPE. Yes, sir.

(The matter referred to and the details of the estimate, is as follows:)

Statement showing the various items under appropriation "Barracks and quarters," the amount estimated for current requirements, etc., also the amount of expenditures made under each item.

Item No.	Purpose.	Current requirements, fiscal year 1919.	Expenditures, fiscal year 1917.	New construction, fiscal year 1919.	Expenditures, fiscal year 1917.
282	Barracks, construction of.....				\$740.28
283	Quarters, construction of.....			\$10,450.00	60 313.42
284	Stables, construction of.....				34 949.04
285	Storehouses, construction of.....				102 035.51
286	Magazines, construction of.....				6 536.64
287	Administration buildings, construction of.....			6,370.00	1 127.43
288	Office buildings, construction of.....				15 735.54
289	Sheds, construction of.....				68,340.64
290	Shops, construction of.....			12,473.00	58,974.86
291	Other necessary buildings, construction of.....			18,000.00	133,877.74
291a	Construction of temporary shelter.....			4,500,000.00	2,116,134.34
292	Repairing public buildings.....	\$11,600,000.00	\$630,493.98		
293	Hire of employees.....	1,535,900.00	295,639.39		

Statement showing the various items under appropriation "Barracks and quarters," the amount estimated for current requirements, etc., also the amount of expenditures made under each item—Continued.

Item No.	Purpose.	Current re- quirements, fiscal year 1919.	Expenditures, fiscal year 1917.	New con- struction, fiscal year 1919.	Expenditures, fiscal year 1917.
291	Rental of quarters for officers.....		\$4,539.21		
295	Rental of barracks.....	\$79,250.00	13,054.32		
296	Rental of quarters for noncommissioned officers and enlisted men.....	240 000 00	3 087.94		
297	Rental of cantonments.....	5 000 00	4,879.17		
298	Rental of camp sites.....	3,531,200.00	84,003.91		
299	Rental of grounds for other military pur- poses.....	79,000.00	15,521.76		
300	Rental of buildings or portions of build- ings.....	101 000 00	7,579.75		
301	Rental of stables.....	600 000 00	25,980.32		
302	Rental of storehouses.....	2,103 800 00	228,895.09		
303	Rental of offices.....	1,058,500.00	92,228.49		
304	Rental of buildings for other military purposes.....	201 000 00	36,718.79		
305	Hire for recruiting stations.....	200 000 00	174,104.58		
306	Hire of lodgings.....	243,774 00	141,832.66		
307	Furniture.....	100 000 00	60,470.58		
308	Wall lockers.....	50 000 00	532.12		
309	Refrigerators.....	60 000 00	40,333.83		
310	Screen doors.....	355,300.00	7,362.83		
311	Window screens.....				
312	Storm doors and sash.....				
313	Window shades.....	7 250.00	1,625.89		
314	Flooring and framing of tents.....	120,700 00	192,828.61		
	Total.....	22,292,674.00	2,059,756.96	\$4,547,293.00	\$2,598,765.43

Estimate, "Barracks and quarters," fiscal year 1919.

Deficiency act June 15, 1917.....	\$47,603,314.20
Deficiency act Oct. 6, 1917.....	49,155,000.00
Total.....	96,758,314.20

Estimate, "Barracks and quarters," United States, fiscal year 1919.

RECAPITULATION.

Item No.	Purpose.	Appro- priation, fiscal year 1919.	Estimate for fiscal year 1919.			Estimate per capita 2,952,000 enlisted men and officers.
			Current re- quirements.	New con- struction.	Total.	
282	Barracks, construction of.....	\$143 000				
283	Quarters, construction of.....	1,270 150		\$10 450	\$10 450	\$0.004
284	Stables, construction of.....	395 000				
285	Storehouses, construction of.....	150 000				
286	Magazines, construction of.....	11 300				
287	Administration buildings, construction of..	47,500		6,370	6,370	.002
288	Office buildings, construction of.....					
289	Sheds, construction of.....	117 000				
290	Shops, construction of.....	44 000		12 473	12 473	.004
291	Other necessary buildings, construction of..	102 300		18 000	18 000	.006
291a	Construction of temporary shelter.....	54,933		4 500 000	4 500 000	1.524
292	Repairing public buildings.....	709 000	\$11,600,000		11,600 000	3.929
293	Hire of employees.....	78,117	1,535 900		1,535,900	.520
294	Rental of quarters for officers.....					
295	Rental of barracks.....	1,600	79,250		79,250	.029
296	Rental of quarters for noncommissioned officers and enlisted men.....	4,800	240 000		240,000	.081
297	Rental of cantonments.....	180	5 000		5 000	.002
298	Rental of camp sites.....	11,420	3,531,200		3,531,200	1.196
299	Rental of grounds for other military pur- poses.....	1,500	79 000		79 000	.027
300	Rental of buildings or portions of buildings..	2 000	101 000		101 000	.034
301	Rental of stables.....	12,000	600,000		600,000	.203

Estimate, "Barracks and quarters," United States, fiscal year 1919—Continued.

RECAPITULATION—Continued.

Item No.	Purpose.	Appropriation, fiscal year 1918.	Estimate for fiscal year 1919.			Estimate per capita 2,952,000 enlisted men and officers.
			Current requirements.	New construction.	Total.	
302	Rental of storehouses.....	\$42,400	\$2,106 800	.....	\$2,106,000	\$0.714
303	Rental of offices.....	21,400	1,058,500	.....	1,058,500	.257
304	Rental of buildings for other military purposes.....	4,100	201,000	.....	201,000	.069
305	Hire of recruiting stations.....	48,000	200,000	.....	200,000	.058
306	Hire of lodgings.....	37,000	243,774	.....	243,774	.033
307	Furniture.....	17,600	100,000	.....	100,000	.034
308	Wall lockers.....	6,100	50,000	.....	50,000	.017
309	Refrigerators.....	3,600	60,000	.....	60,000	.020
310	Screen doors.....	9,200	355,500	.....	355,500	.120
311	Window screens.....					
312	Storm doors and sash.....					
313	Window shades.....	500	7,250	.....	7,250	.002
314	Flooring and framing of tents.....	2,500	120,700	.....	120,700	.040
	Total.....	3,339,500	22,292,674	\$4,547,293	26,839,967	.....

¹ \$10,000 of this amount for furniture in China.

FORT BLISS, TEX.

Item No. 283. Purchase of 31 privately-owned houses for quarters:

Construction..... \$10,450

Quarters.—The amount estimated, \$10,450, is to provide for the purchase of 31 houses now owned by officers, which are to be used as quarters for officers and non-commissioned officers stationed at and near Fort Bliss, where there are now seven regiments and many smaller units, with barracks and quarters for only one regiment. It is believed that such purchase would result in a saving to the Government.

LETTERMAN GENERAL HOSPITAL, PRESIDIO OF SAN FRANCISCO, CAL.

Item No. 284. Carpenter and plumber repair shops:

Construction..... \$12,473
Lighting..... 437

Total..... 12,910

Carpenter and plumber repair shops.—Size of building 60 by 117 feet, to be of reinforced concrete. It is required to replace the old frame dilapidated building now used as a shop. According to the latest information in this division the authorized strength at this general hospital is 24 officers and 191 enlisted men, making a total of 254. There are also at this hospital 44 Army Nurse Corps, and 39 civilians. The amount estimated contemplates a permanent building for these purposes, including a room for use as lumber shed, storing crates and crating material; also for lime, cement, etc. It is impossible to keep the lumber dry in the present temporary structure. These shops were included in the estimates for the fiscal year 1918, but in view of the reduced appropriation as passed by Congress the project was cut out.

FORT M'DOWELL, CAL.

Item No. 291. Disinfecting plant for clothing:

Construction..... \$10,500
Lighting..... 368

Total..... 10,868

Disinfecting plant for clothing.—The size of this building will be 17 by 34 feet and will be of concrete walls and floor and tile roof. It is needed for the proper disinfection of recruits' clothing, the effects of soldiers suffering with contagious diseases, blankets, etc., which at times become infected with vermin. The present disinfecting plant is unsightly, small, and unsuited for thorough disinfection, and when sulphur is used it requires great care not to burn the building and contents. This project was included in the estimates to Congress for the fiscal year 1918, but was eliminated on account of lack of funds. There are 29 officers, 19 noncommissioned officers, and 1,425 enlisted men at this post. The kind of buildings now at this post are concrete and frame.

PRESIDIO OF MONTEREY, CAL.

Item No. 287. New administration building to replace one destroyed by fire:

Construction.....	\$6,370
Plumbing.....	478
Heating.....	414
Lighting.....	223
Total.....	7,485

Administration building—one story.—The size of this building is not given in correspondence, but it is to replace one destroyed by fire March 13, 1916, which was 32 feet 4 inches by 60 feet 6 inches. The building is to be of frame construction, with either tin or slate roof. The authorized strength of this garrison in officers and men is 1,102, divided as follows: 53 officers, 17 noncommissioned officers, and 1,032 enlisted men. Buildings at this post are of frame construction.

PRESIDIO OF SAN FRANCISCO, CAL.

Item No. 291. Building to house telephone switchboard:

Construction.....	\$7,500
Plumbing.....	563
Heating.....	488
Lighting.....	263
Total.....	8,814

Building to house telephone switchboard—two stories.—Size of building to be 37 by 25 feet. To be of concrete, with either tin or slate roof. This building is required to properly house new switchboard, which is to be increased from 200-drop equipment to 640-drop equipment. The authorized strength of garrison in officers and men is 5,749, which includes 168 officers and 5,581 enlisted men. The kind of buildings now at this post are of frame, brick, and concrete.

Barracks and quarters, 282—Barracks, construction of.

	United States.			Philippine Islands.			Grand total.
	Cur- rent re- quire- ments.	New con- struction.	Total.	Cur- rent re- quire- ments.	New- con- struc- tion.	Total.	
Appropriated, fiscal year 1918.....	\$143,000.00	\$143,000.00	.....	.....	.....	\$143,000.00
Expended, fiscal year 1917.....	740.28	740.28	.....	.....	.....	740.28

REMARKS.

No estimate is made for fiscal year 1919 under this item.

Barracks and quarters, 283—Quarters, construction of.

[Estimate fiscal year 1919, \$10,450.]

	United States.			Philippine Islands.			Grand total.
	Cur- rent re- quire- ments.	New con- struction.	Total.	Cur- rent re- quire- ments.	New con- struc- tion.	Total.	
Estimate		\$10 450.00	\$10,450.00				\$10,450.00
Appropriated, fiscal year 1918.....		1,270 150.00	1,270,150.00				1,270,150.00
Expended, fiscal year 1917.....		60,313.42	60,313.42				60,313.42

REMARKS.

The amount stated under this item (\$10,450) is to provide for the purchase of 31 small privately owned houses on the Fort Bliss Reservation, June 26, 1917, copy of which follows:
Proceedings of a board of officers convened at Fort Bliss, Tex., pursuant to the following order:

Special Orders, No. 89—Extract.

HEADQUARTERS EL PASO DISTRICT,
El Paso, Tex., June 26, 1917.

11. A board of officers is hereby appointed to meet at Fort Bliss, Tex., at the call of the president thereof, to consider and make recommendations of such questions regarding ownership and disposition of temporary structures erected on the reservation at Fort Bliss, Tex., or any neighboring camp sites referred to it.
Detail for the board: Col. William D. Beach, Cavalry, D. C. L.; Col. Daniel L. Howell, Thirty-fourth Infantry; Capt. Eugene J. Ely, Cavalry, D. O. L.
By command Brig. Gen. Bell:

VAUGHN W. COOPER,
Captain, Cavalry, D. O. L., District Adjutant.

FORT BLISS, TEX., July 3, 1917.

The board met at 10 a. m., pursuant to the foregoing order.
Present: All members.
The order convening the board was read.
The board discussed in general the matter of the rights of the parties concerned and directed the recorder to write letters to the commanding officers of all organizations concerned, requesting information as to ownership, cost of construction, occupancy and present status of all privately owned buildings within the limits of the terrain assigned to their respective organizations.
The board then at 11 a. m. adjourned to meet at the call of the president.

E. J. ELY,
Captain, Cavalry, D. O. L., Recorder.

FORT BLISS, TEX., July 27, 1917.

The board met from time to time and examined the reports received from the various regimental commanders hereto attached and inspected the various structures reported upon.
The board finds that the following described buildings are of such construction, location and appearance as to be suitable for use as cantonment quarters for officers and noncommissioned officers, and recommends that the same be purchased from the present owners by the Government.

Num-ber.	Owner.	Date built.	Cost.	Present appraised value.
7-1	Capt. O. C. Aleshire, Seventeenth Cavalry.....	November, 1916...	\$600	\$500
7-2	Capt. R. W. Holderness, Seventeenth Cavalry.....	do.....	600	500
7-3	Capt. T. H. Cunningham, Seventeenth Cavalry.....	do.....	500	500
7-4	Capt. E. J. Ely, Seventeenth Cavalry.....	do.....	450	450
7-5	Maj. Edmund M. Leary, Seventh Cavalry.....	December, 1916...	550	400
7-6	Capt. H. T. Bull, Seventeenth Cavalry.....	do.....	500	400
7-7	Capt. L. W. Pruntly, Seventh Cavalry.....	do.....	500	250
7-8	First Lieut. F. W. Boye, Seventeenth Cavalry.....	do.....	500	400
7-9	Capt. P. D. Glassford, Fifth Field Artillery.....	do.....	1,000	600
7-11	First Lieut. F. D. Cooks, M. R. C.....	do.....	400	300
34-1	Col. Alfred Hasbrouck, Twentieth Infantry.....	November, 1916...	1,000	600
34-40	Capt. Clyde L. Eastman, Forty-third Infantry.....	do.....	1,000	600
34-41	Sergt. Walsh, Eighth Cavalry.....	July, 1916.....	500	400
34-42	do.....	do.....	375	300
34-43	Capt. Davidson, Seventh Infantry.....	March, 1916.....	400	300
34-17	Lieut. Corbett, Medical Corps.....	October, 1916.....	600	500
34-16	Lieut. O. G. Pitts, Seventh Infantry.....	November, 1916...	600	450
34-15	First Lieut. Floyd C. Hecox, Sixty-first Infantry.....	do.....	600	500
34-14	Capt. F. B. Alderdice, Thirty-fourth Infantry.....	do.....	1,200	600
34-44	E. B. Oldham, M. S. E.....	July, 1915.....	300	250
34-46	Sergt. Snyder, Seventeenth Cavalry.....	August, 1916.....	300	75
34-47	J. T. McAniff, M. S. E.....	July, 1916.....	300	100
34-48	Sergt. Hirsch, Eighth Cavalry.....	June, 1916.....	300	100
34-49	Sergt. Wells, Eighth Cavalry.....	do.....	150	75
34-50	Sergt. F. J. Locke, Medical Corps.....	June, 1914.....	400	75
34-51	L. C. Olson, Post Blacksmith.....	June, 1915.....	400	200
34-52	Corp. Hutton, Sixteenth Infantry.....	November, 1916...	300	200
34-53	Pvt. Kline, Eighth Cavalry.....	September, 1916...	650	275
34-54	Pvt. Lee, Thirty-fourth Infantry.....	November, 1916...	400	275
34-58	Pvt. Martin, Quartermaster Corps.....	May, 1917.....	200	75
1	Brigade headquarters Sixth Field Artillery, officers' mess.....	1914.....	300	200
Total.....				10,450

In each case above mentioned the owner has certified that no Government material has been used in construction, which statements have been verified as far as practicable, to the satisfaction of the board. The board recommends the purchase of these structures for use as quarters for officers and noncommissioned officers stationed at and near Fort Bliss, where there are now seven regiments and many smaller units, with barracks and quarters for only one regiment, in the belief that such purchase would result in a saving to the Government, and would greatly add to the comfort and health of the command with very small expense.

The board finds from investigation that a number of privately-owned structures on the Fort Bliss Reservation are being rented for amounts greatly in excess of a reasonable rate of interest on the investment.

The board recommends that other structures, which have been permitted to be built on the reservation and are not suitably constructed or located for quarters for officers and noncommissioned officers, be allowed to remain as at present, subject to the following restrictions:

1. That no person not in the military service of the United States shall be allowed to purchase, rent, occupy, or act as agent for any structure on the military reservation.

2. That in case any privately-owned structure on the military reservation is occupied by any person other than the owner, the rental charge shall not exceed a rate which would amount to 33½ per cent per annum of the value of said property as appraised by a duly authorized board of officers.

3. That whether such building, privately owned, shall be occupied by the owner, shall be rented or shall stand vacant, the ownership of same shall vest in the Government three years after date of construction.

4. That in case any privately owned structure occupies any portion of the reservation which has been or may be assigned to any organization, and should such incoming organization not desire to purchase or rent such structure, the owner shall be notified by the commanding officer to remove such structure within 30 days, and should such owner fail to remove structure within the time designated, same shall be wrecked or removed by the commanding officer or otherwise used for Government purposes in his discretion—provided that the 30 days' notice above prescribed may be reduced in the discretion of the commanding officer, should the exigencies of the service so require.

There being no further business before it, the board adjourned to meet at the call of the president.

W. D. BEACH,
Colonel, Cavalry, President.

D. L. HOWELL,
Colonel, Thirty-fourth Infantry, Member.

E. J. ELY,
Captain, Cavalry, D. O. L., Recorder.

Commanding officer, Fort Bliss, Tex., June 25, 1917, remarked: "Conditions at Fort Bliss have rendered necessary the construction by officers and enlisted men, at their own expense, of living quarters; some of these are well worthy of purchase by the Government and some should be abolished."

From an administrative, as well as an economical standpoint, it is highly advisable that quarters such as above, suitable for occupancy by officers or enlisted men, should be purchased by the Government rather than to permit their sale or rental by the original builders or their successors. One house (the case is now before me for adjudication) was built by persons in the military service from private funds, by written authority from the War Department, so that it would appear to be the policy of the department to mitigate the hardship incident to men with families as much as possible. There are a number of excellent houses on this reservation built by private means which have been rented or sold.

Barracks and quarters, 284—Stables, construction of.

[Estimate, fiscal year 1919, \$ ———.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....							
Appropriated fiscal year 1918.....		\$395,000.00	\$395,000.00				\$395,000.00
Expended fiscal year 1917 ..		34,949.04	34,949.04				34,949.04

REMARKS.

No estimate is made for fiscal year 1919 under this item.

Barracks and quarters, 285—Storehouses, construction of.

[Estimate, fiscal year 1919, \$ ———.]

	United States.			Philippine Islands.			Grand Total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....							
Appropriated fiscal year 1918.....		\$159,000.00	\$150,000.00				\$150,000.00
Expended fiscal year 1917 ..		102,035.51	102,035.51				102,035.51

REMARKS.

No estimate is made for fiscal year 1919 under this item.

Barracks and quarters, 286—Magazines, construction of.

[Estimate, fiscal year 1919, \$.....]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....							
Appropriated, fiscal year 1918.....		\$11,300.00	\$11,300.00				\$11,300.00
Expended, fiscal year 1917.....		6,536.64	6,536.64				6,536.64

REMARKS.

No estimate is submitted for fiscal year 1919 under this item.

Barracks and quarters, 287—Administration buildings, construction of.

[Estimate, fiscal year 1919, \$——.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....		\$6,370.00	\$6,370.00				\$6,370.00
Appropriated, fiscal year 1918.....		47,500.00	47,500.00				47,500.00
Expended, fiscal year 1917.....		1,127.43	1,127.43				1,127.43

REMARKS.

United States.—The amount estimated for under this item will be required for new construction as follows: Presidio of Monterey, Cal., construction of new administration building to replace one destroyed by fire, \$6,370.

This administration building is to be one story in height. Correspondence does not state the size of building, but it is to replace one destroyed by fire March 13, 1916, which was 32 feet 4 inches by 60 feet 6 inches. The building is to be frame construction, with either tin or slate roof. The authorized strength of the garrison in officers and men is 1,102, divided as follows: Fifty-three officers, 17 noncommissioned officers, and 1,032 enlisted men. The buildings at this post are generally of frame construction.

Expenditures for fiscal year 1917 under this item were approximately \$1,100.

Practically all new construction for the fiscal year 1918 has been eliminated, in view of the reduced appropriation "Barracks and quarters" as passed by Congress.

Barracks and quarters 288—Office buildings, construction of.

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....							
Appropriated, fiscal year 1918.....							
Expended, fiscal year 1917.....		\$15,735.54	\$15,735.54				\$15,735.54

REMARKS.

No estimate is made for fiscal year 1919 under this item.

Barracks and quarters 289—Sheds, construction of.

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New Construction.	Total.	
Estimate.....							
Appropriated, fiscal year 1918.....		\$117,000.00	\$117,000.00				\$117,000.00
Expended, fiscal year 1917.....		68,340.64	68,340.64				68,340.64

REMARKS.

No estimate is submitted for fiscal year 1919 under this item.

Barracks and quarters 290—Shops, construction of.

[Estimate fiscal year 1919, \$12,473.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....		\$12,473.00	\$12,473.00				\$12,473.00
Appropriated, fiscal year 1918.....		44,000.00	44,000.00				44,000.00
Expended, fiscal year 1917.....		58,974.85	58,974.85				58,974.85

REMARKS.

United States.—The amount estimated under this item will be required wholly for new construction and is to provide for the following item which it is contemplated will be undertaken with the funds estimated for: Letterman General Hospital, Cal., carpenter and plumber repair shops, \$12,473.

The size of this building is to be 60 feet by 117 feet, to be of reinforced concrete. It is required to replace the old frame dilapidated building now used as a shop. According to the latest information the authorized strength at this general hospital is 24 officers and 191 enlisted men, making a total of 254. There are also at this hospital 44 Army Nurse Corps and 39 civilians. The amount estimated herewith is for the construction of a permanent building for these purposes, including a room for use as lumber shed, storing crates, and crating material, also for lime, cement, etc. It is impossible to keep lumber dry in the present temporary structure. These shops were included in estimate for fiscal year 1918, but in view of the reduced appropriation as passed by Congress, the project was eliminated.

During the fiscal year 1917 there were expended for shop buildings at various stations, mostly on the Mexican border, approximately \$59,000.

Barracks and quarters 291—Other necessary buildings, construction of.

[Estimate fiscal year 1919, \$18,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....		\$18,000.00	\$18,000.00				\$18,000.00
Appropriated, fiscal year 1918.....		102,300.00	102,300.00				102,300.00
Expended, fiscal year 1917.....		133,877.74	133,877.74				133,877.74

REMARKS.

United States.—The amount estimated under this item will be required entirely for new construction and is to provide for the following projects:

Fort McDowell, Cal., disinfecting plant for clothing..... \$10,500
 Presidio of San Francisco, Cal., building to house telephone switchboard.... 7,500

Total..... 18,000

McDowell, Cal.—The disinfecting plant for clothing at this post is to consist of a building 17 by 34 feet and will be a concrete wall and floor, and tile roof. It is needed for the proper disinfection of recruits' clothing, the effects of soldiers suffering with contagious diseases, blankets, etc., which at times become infected with vermin. At present disinfecting plant is unsightly, small and unsuited for thorough disinfection, and when sulphur is used requires a great deal of care not to burn the building and contents. This project was included in the estimates to Congress for the fiscal year 1916, but was eliminated on account of the lack of funds. The garrison capacity of this post consists of 29 officers, 19 noncommissioned officers, and 1,425 enlisted men. The character of construction of buildings now at this post is concrete and frame.

Presidio of San Francisco, Cal.—The building to house telephone switchboard at this post is to be of two stories in height and to be of size 37 by 25 feet, and is to be constructed of concrete with either tin or slate roof. This building is required to properly house new switchboard which is to be increased from 200-drop equipment to 640-drop equipment. The authorized strength of garrison officers and men at this post is 5,749, which includes 168 officers and 5,581 enlisted men. The character of buildings at this post is a frame, brick and concrete.

During the fiscal year 1917 the following expenditures were made under this item:

Brooklyn, N. Y., animal shelter, Thirty-seventh Infantry National Guard	\$3, 175.00
Schofield Barracks, shelter for motor vehicles, etc.....	3, 141.00
L. H. Roots, construction of bathhouses.....	1, 600.00
Plattsburg Barracks, construction of hospital mess and kitchen.....	2, 450.00
Hogan, Alaska:	
Material for new stable buildings.....	594.25
Labor for above.....	1, 050.00
Sam Houston:	
Additional shelter, veterinary hospital.....	7, 200.00
Construction telegraph office.....	1, 500.00
Schofield Barracks, school for farriers.....	1, 650.00
Shafter, construction two pagolas, department hospital.....	503.00
Sam Houston, Coal bins.....	850.00
Eagle Pass, latrines, shelters.....	6, 000.00
Schofield Barracks, mess and kitchen ambulance No. 9.....	1, 667.35
Sam Houston, animal shelters.....	101.39
Eagle Pass, latrines for troops.....	2, 000.00
Sam Houston, motor truck shelters.....	4, 588.56
Brownsville, latrines for Regular troops.....	1, 808.77
Fort Sill, temporary buildings.....	96.82
Fort Bliss:	
Animal shelter, remount depot.....	1, 500.00
Additional construction animal shelter.....	1, 000.00
Leon Springs, construction work on reservation.....	925.46
Mineola, L. I., temporary construction, Aviation School.....	6, 150.00
Sam Houston, telephone exchange.....	1, 120.00
Presidio, San Francisco, mess shelter, kitchens, etc.....	4, 800.00
Jackson Barracks, mess halls, lavatories, etc.....	7, 500.00
Wetherell, R. I., material for mess shelters and latrines.....	1, 723.90
Washington, D. C., kitchens, latrines at Potomac Park.....	500.00
Fort Slocum, addition to mess hall.....	5, 448.16
Snelling, Minn., building for telephone system.....	1, 400.00
Chicago Depot, portable garage, motor transportation.....	1, 023.00
Fort Thomas, mess hall.....	7, 000.00
Fort Barry, Ga.....	8, 900.00
Georgia, shelter for animals (Cavalry, Georgia).....	2, 560.00
Brooklyn, N. Y., animal shelter.....	1, 200.00
Fort Sheridan, garage for ambulances.....	500.00
Jefferson Barracks, garage, construction of.....	940.00
Fort Myer, latrine and shower building.....	850.00
Mason, Cal., kitchen and dining room for Signal Corps.....	1, 680.00
Philadelphia, Pa., construction portable garage.....	3, 600.00
Sheridan, Ill.:	
Latrines for Regular Field Artillery.....	1, 800.00
Bathhouses for above.....	1, 700.00
Potomac Park, shower baths for troops.....	5, 268.00
New Haven, Conn., cook shacks, Second Infantry.....	225.00
Arcadia, Cal., mess building and kitchens.....	1, 600.00
Augusta, Me., shelter for animals, Second Infantry.....	2, 500.00

State South Carolina, latrines, etc.....	\$2,769.00
Riley, Kans., eight mess and kitchen buildings.....	1,480.00
Watertown Arsenal, mess and kitchen shelter.....	500.00
Goldsboro, N. C., mess hall, etc., Second North Carolina Infantry.....	272.00
Panama Canal, shelter for animals.....	10,800.00
L. H. Roots, 16 kitchens, etc.....	4,060.00
Total.....	133,841.06

No construction work under this item for fiscal year 1918 is contemplated due to the reduction in this appropriation made by Congress.

Item B. & Q., 291a.—Construction of temporary shelter.

[Estimate, fiscal year 1919, \$4,500,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....		\$4,500,000.00	\$4,500,000.00				\$4,500,000.00
Appropriated, fiscal year 1918.....		54,933.00	54,933.00				54,933.00
Expended, fiscal year 1917.....		2,116,134.34	2,116,134.34				2,116,134.34

REMARKS.

United States.—The supplies to be procured under this item consist of lumber, nails, brick, cement, and various kinds of building material required where authority is given to construct such temporary shelter, etc., by purchase of material and hire of labor.

The services to be performed under this item consist of the hire of labor, or job or contract service in the construction of temporary buildings, etc.

The large increase estimated for 1919 requirements over the preceding fiscal year, is to provide for construction of temporary buildings and shelter at cantonments, various camps, etc., the necessity for which is continually arising due to war conditions.

The expenditure of approximately three and one-third million dollars during the fiscal year 1917 was on account of the Mexican border situation.

Item B. & Q. 292.—Repairing public buildings at military posts.

[Estimate, fiscal year 1919, \$11,600,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$11,600,000.00		\$11,600,000.00				\$11,600,000.00
Appropriated, fiscal year 1918.....	709,000.00		709,000.00				709,000.00
Expended, fiscal year 1917.....	630,493.98		630,493.98				630,493.98

REMARKS.

Supplies.—The supplies to be purchased under this item consists of lumber, nails, cement, paint, and all other supplies required in keeping in repair all the public buildings at the various military posts and stations except those chargeable to other appropriations such as hospitals, quarters for hospital stewards, military post exchange and shooting galleries and other buildings on target ranges.

Services.—The services to be performed under this item consist of both job and contract services required in the repair and maintenance of public buildings at military posts and stations.

United States.—All of the above amount will be required to meet current requirements. Of the amount estimated \$1,100,000 will be required for permanent construction at regular posts and \$10,500,000 will be required for repairs to temporary buildings at the cantonments for the Regular Army, National Army, and National Guard Army. The \$1,100,000 estimated for permanent posts is based upon the estimate for the fiscal year 1918 plus 10 per cent for the probable increase in cost of material and labor. It is believed that \$750,000 will be required for making repairs to public buildings based on annual inspection reports of March 1, 1917, and the remainder, \$350,000, will be required to cover special repairs and alterations to buildings including repairs caused by storms, floods, fires, etc.

Annual repairs.—The amount estimated for permanent construction is \$100,000 more than that included in the estimate for 1918. The following explanation is given for this increase: At a number of posts there are many frame buildings which require frequent painting, etc., and as they have been in use for many years, repairs become more numerous. Furthermore, the total amount of the annual estimates as submitted from the various posts in departments, headquarters, and independent stations for the fiscal year 1918 was approximately \$1,916,118, while the total allotted is only \$655,297.

Special repairs and alterations.—The amount estimated (\$350,000) for special repairs and alterations (current requirements) is the same as that estimated for 1918. Funds under this heading are required for making repairs that can not be foreseen, such as damages by storms, hurricanes, fires, etc., and for miscellaneous items of work that are properly chargeable under this head. Under this item also are chargeable repairs which in former years have been charged to appropriation "S. S. & T., Q. M. C.," such as central heating plants, power-plant buildings, ice and refrigerating plants (building proper), pump houses, water tanks, dormitories, sawmills (in connection with fuel), etc.

The amount \$1,100,000 will be required to keep in repair approximately 9,800 buildings the approximate value of which is estimated at \$53,600,000 at permanent posts.

Item, barracks and quarters 293.—Hire of employees.

[Estimate, fiscal year 1919, \$1,535,900.

	United States.			Philippine Islands.			Grand total.
	Current require- ments.	New construc- tion.	Total.	Current require- ments.	New construc- tion.	Total.	
Estimate.....	\$1, 535, 900.00	.....	\$1, 535, 900.00	.....	.....	.....	\$1, 535, 900.00
Appropriated fiscal year 1918.....	78, 117.00	.....	78, 117.00	.....	.....	.....	78, 117.00
Expended fiscal year 1917.....	295, 639.39	.....	295, 639.39	.....	.....	.....	295, 639.39

REMARKS.

The estimate for the fiscal year 1919 for permanent posts is based on the estimate for the fiscal year 1918, plus a small percentage of increase to allow for advance in labor. The estimate for this purpose is \$85,900 for permanent posts and \$1,450,000 for cantonments, the latter of which is based upon half the per capita cost at permanent posts for 1918, for 1,196,287 men in the various cantonments. Total for employees, \$1,535,900.

The services (class 1, personal) rendered under this item are for the hire of employees in connection with repair and maintenance of public buildings at military posts, the positions to be designated as follows: (ivil engineer and superintendent of construction, engineers, carpenters, masons, painters and tinnerns, and miscellaneous labor. A complete list of the employees paid from this item for the fiscal year 1917 and those estimated for under this item for the fiscal year 1917 and those estimated for under this item for fiscal year 1919 is shown in the Treasury Book of Estimates for the fiscal year 1919.

Item B. & Q. 294.—Quarters for officers, rental of.

[No estimate for fiscal year 1919.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....							
Appropriated, fiscal year 1918.....							
Expended, fiscal year 1917.....	\$4,539.21		\$4,539.21				\$4,539.21

REMARKS.

Nothing is estimated for for the fiscal year 1919, as all officers have been placed on a commutation status when not serving at a military post where quarters are available and in the field.

NOTE.—There was expended for the fiscal year 1917, \$4,539.21, as follows:

Garden City, L. I., N. Y.....	\$952.50
Hempstead, L. I., N. Y.....	1,529.00
Mineola, L. I., N. Y.....	806.50
Westbury, L. I., N. Y.....	727.50
Miscellaneous.....	523.71
Total.....	4,539.21

The above amounts were authorized by the Secretary of War to house several officers stationed at the Aviation School and Mineola, L. I., and considered an emergency measure. Commutation of quarters was granted for the reason that these officers would be moved about from place to place a great deal and even the Aviation School itself probably moved from Mineola to a new site. Some of the officers are married while others are not and if quarters were rented it would necessitate considerable time, trouble, and inconvenience which, so far as efficiency is concerned, would more than make up the difference on a commutation status. Therefore, these officers were granted commutation of quarters and the saving of \$1,200 approximately was thus saved annually.

Item, barracks and quarters 295.—Rental of barracks.

[Estimate fiscal year 1919, \$79,250.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$79,250.00		\$79,250.00				\$79,250.00
Appropriated fiscal year 1918.....	1,000.00		1,000.00				1,000.00
Expended fiscal year 1917.....	13,054.32		13,054.32				13,054.32

REMARKS.

The estimate for the fiscal year 1919 is based on the estimate for the fiscal year 1918 for other than cantonments, and is estimated to be \$4,250.

The estimate for cantonment requirements is \$75,000, making a total of \$79,250 for this item.

The expenditures for the fiscal year 1917 were as follows:

Roma, Tex.....	\$300.00
San Fordyce, Tex.....	552.00
Tientsin, China.....	9,841.25
Miscellaneous.....	2,361.07
Total.....	13,054.32

The barracks in question were rented for sheltering troops on the Mexican border, Tientsin, China, and other miscellaneous places.

Item, barracks and quarters 296—Rental of quarters. noncommissioned officers and enlisted men.

[Estimate, fiscal year 1919, \$240,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$240,000.00	.....	\$240,000.00	.....	.....	.....	\$240,000.00
Appropriated fiscal year 1918.....	4,900.00	.....	4,900.00	.....	.....	.....	4,900.00
Expended fiscal year 1917..	3,087.94	.....	3,087.94	.....	.....	.....	3,087.94

REMARKS.

Services.—The services procured under this item consist entirely of class I non-personal, rental under lease of quarters for enlisted men on duty where no public quarters are available.

Remarks.—It is contemplated to pay commutation of quarters to the majority of enlisted men on duty at posts, recruiting stations, etc., where no public quarters are available in lieu of renting quarters. The estimated amount for this purpose for other than cantonments is \$13,000, based upon the estimate for fiscal year 1918, plus a small percentage for increase in cost of rentals. The estimate for cantonment requirements is \$227,000, making a total for this item of \$240,000.

Expenditures for the fiscal year 1917 were mostly for Mexican border stations, as follows:

Deming, N. Mex.....	\$360.00
El Paso, Tex.....	810.00
Mission, Tex.....	756.00
San Antonio, Tex.....	944.00
Miscellaneous.....	217.94
Total.....	3,087.94

Item, barracks and quarters 297—Rental of cantonments.

[Estimate fiscal year 1919, \$5,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$5,000.00	.....	\$5,000.00	.....	.....	.....	\$5,000.00
Appropriated fiscal year 1918....	180.00	.....	180.00	.....	.....	.....	180.00
Expended fiscal year 1917.....	4,879.17	.....	4,879.17	.....	.....	.....	4,879.17

REMARKS.

The amount estimated for under this item is for rentals of cantonments at camps near regular posts and for the National Army, National Guard Army, and Regular Army requirements. The cost for fiscal year 1917 under this item was as follows:

Annapolis Junction, Md.....	\$4,687.50
San Benito, Tex.....	191.67
Total rental.....	4,879.17

Item, barracks and quarters 298.—Rental of camp sites.

[Estimate fiscal year 1919, \$3,531,200.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$3,531,200.00	.....	\$3,531,200.00	.....	.....	.....	\$3,531,200.00
Appropriated fiscal year 1918.....	11,420.00	.....	11,420.00	.....	.....	.....	11,420.00
Expended fiscal year 1917.....	84,003.91	.....	84,003.91	.....	.....	.....	84,003.91

REMARKS.

The estimate for the fiscal year 1919 for places other than cantonment camps is \$31,200 and is based on the estimated requirements for the fiscal year 1918 plus a small percentage to allow for increase of rental rates; \$250,000 is for rental of embarkation camps, \$250,000 for rental of 32 remount stations, \$2,000,000 for rental of camps for cantonment sites, and \$1,000,000 for rental of grounds, etc., for troops in France. The rentals for cantonment camps are based on a rental of approximately 5,000 acres for each camp at \$10 per acre for the 32 camps. It is believed that provisions should be made for the necessary rentals for at least 500,000 men in France, part of this number living at the front and others in cantonments and rented buildings, most of which would be located on private lands and in private buildings. Assuming there would be 500,000 to be thus accommodated and taking the cost of \$2 per capita, the average amount in the United States, the sum of \$1,000,000 would be necessary for this purpose.

The total amount estimated under this item is \$3,531,200.
 Following is a list of the larger rentals under this item during the fiscal year 1917:

Allentown, Pa.....	\$3,125.00	McPherson, Ga., Fort.....	735.51
Alpine, Tex.....	720.00	Marfa, Tex.....	2,547.34
Brownsville, Tex.....	6,412.75	McAllen, Tex.....	6,635.31
Buda, Tex.....	620.00	Mercedes, Tex.....	688.30
Calexico, Cal.....	4,314.33	Monte Christo, Tex.....	678.84
Candelaria, Tex.....	360.00	Montgomery, Ala.....	5,280.00
Columbus, N. Mex.....	5,726.25	New Braunfels, Tex.....	1,125.00
Comal, Tex.....	767.50	Nogales, Ariz.....	6,277.24
Corpus Christi, Tex.....	1,546.17	Pharr, Tex.....	623.30
Del Rio, Tex.....	1,483.93	Portero, Cal.....	360.00
Deming, N. Mex.....	1,373.65	Presidio, Tex.....	493.34
Detroit, Mich.....	810.80	Progreso, Tex.....	600.00
Douglas, Ariz.....	2,277.89	St. Elmo, Tex.....	579.00
Eagle Pass, Tex.....	2,145.67	Salem, N. H.....	666.67
Eatontown, N. J.....	416.67	San Antonio, Tex.....	1,155.40
El Paso, Tex.....	4,640.36	St. Asaph, Va.....	318.33
Harlingen, Tex.....	257.82	San Pedro, Tex.....	275.00
Harvard, Mass.....	886.12	Shirley, Mass.....	233.17
Hidalgo County, Tex.....	381.77	Sierra Blanca, Tex.....	1,035.00
Hot Springs, Tex.....	275.00	Yuma, Ariz.....	2,043.55
Imperial Beach, Cal.....	1,180.00	Valentine, Tex.....	625.00
Jeffersonville, Ind.....	107.50	Wetmore, Tex.....	302.50
Kushla, Tex.....	1,462.50	Miscellaneous.....	4,945.68
Llano Grande, Tex.....	2,650.00		
Lancaster, Mass.....	291.74		
Luxello, Tex.....	1,548.00		
		Total.....	84,003.91

B. & Q. 299.—Rental of grounds for other military purposes.

[Estimate, fiscal year 1919, \$79,000.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New construc-tion.	Total.	Current require-ments.	New construc-tion.	Total.	
Estimate.....	\$79,000 00	.....	\$79,000 00	.....	.....	.....	\$79,000.00
Appropriated fiscal year 1918..	1 500 00	.....	1,500.00	.....	.....	.....	1,500.00
Expended fiscal year 1919.....	15,521.76	.....	15,521.76	.....	.....	.....	15,521.76

REMARKS.

Services.—All of the above services will be class 1 nonpersonal, the funds estimated thereunder being required to pay rent of grounds for drill and corral purposes, aviation purposes, parties detailed on progress map duty and other miscellaneous duties. The estimate for the fiscal year 1919 is for places other than cantonment camps and is based on the estimated requirements for the fiscal year 1918 plus a small percentage to allow for increase of rental costs.

The estimated cost for such purposes is \$4,000; that for cantonment sites is \$75,000, and is based upon approximately one-half the per capita cost for 1918 requirements multiplied by the number of men in the various cantonment, estimated at 1,196,207.

The rentals during the fiscal year 1917 under this item were almost entirely for the Mexican border and enumerated as follows:

Brownsville, Tex.....	\$1,282.50	Nogales, Ariz.....	\$2,264.10
Douglas, Ariz.....	451.00	San Antonio, Tex.....	6,633.92
Hidalgo County, Tex.....	475.00	Miscellaneous.....	3,292.23
Honolulu, Hawaii.....	729.67		
Mission, Tex.....	393.34	Total.....	15,521.76

B. & Q. 300.—Rental of buildings or portions of buildings.

[Estimate, fiscal year 1919, \$101,000.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New construc-tion.	Total.	Current require-ments.	New construc-tion.	Total.	
Estimate.....	\$101,000.00	.....	\$101,000.00	.....	.....	.....	\$101,000.00
Appropriated, fiscal year 1918.....	2,000.00	.....	2,000.00	.....	.....	.....	2,000.00
Expended, fiscal year 1917..	7,579.75	.....	7,579.75	.....	.....	.....	7,579.75

REMARKS.

Services.—The services to be procured under this item consist of all rentals of buildings or portions of buildings for military purposes that would not be classified under the preceding items, such as hire of garage space, rental of hangars, hospital space, etc.

The estimated cost at stations other than for cantonments is \$5,500; that for cantonments is \$95,500, and is based upon approximately one-half the per capita cost for 1918, multiplied by the number of men in the various cantonments. The expenditures under this item for the fiscal year 1917 were as follows:

Brownsville, Tex.....	\$326.50	Nogales, Ariz.....	690.00
Chicago, Ill.....	324.70	Miscellaneous.....	1,304.05
El Paso, Tex.....	4,502.00		
New York City, N. Y.	342.50	Total.....	7,579.75

B. & Q. 301.—Rental of stables.

[Estimate, fiscal year 1919, \$600,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$600,000.00	.....	\$600,000.00	.....	.....	.....	\$600,000.00
Appropriated, fiscal year 1918.....	12,000.00	.....	12,000.00	.....	.....	.....	12 000.00
Expended, fiscal year 1919.....	25,980.32	.....	25,980.32	.....	.....	.....	25,980.32

REMARKS.

Services.—The amount under this item is for rental of stables at the various quartermaster depots, etc., and for the authorized private mounts of officers on duty at stations where no public stable accommodations are available. The estimated cost at stations other than cantonments is \$33,000, which is a slight increase over the amount of the estimate for 1918 and the amount estimated for cantonments is \$567,000, making a total of \$600,000.

The following is a list of the stable rentals during the fiscal year 1917:

Boston, Mass.....	\$832.00	Philadelphia, Pa.....	1,063.66
Chicago, Ill.....	463.33	Roanoke, Va.....	247.50
Garden City, N. Y.....	363.60	Seattle, Wash.....	275.00
Hartford, Conn.....	660.42	Tientsin, China.....	600.00
Newark, N. J.....	886.67	Miscellaneous.....	18,059.13
New York City.....	2,210.00		
Paris, France.....	319.01	Total.....	25,980.32

Item B. & Q. 302.—Rental of storehouses.

[Estimate, fiscal year 1919, \$2,103,800.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$2,103,800.00	.....	\$3,103,800.00	.....	.....	.....	\$2,103,800.00
Appropriated, fiscal year 1918.....	42,400.00	.....	42,400.00	.....	.....	.....	42,400.00
Expended, fiscal year 1917.....	226,895.08	.....	226,895.08	.....	.....	.....	226,895.08

REMARKS.

Services.—The services to be procured under this item consist of the rentals under lease of the necessary buildings used as storehouses for the Quartermaster Corps, Medical Corps, Ordnance Department, etc., of the Army. The estimated cost at stations other than cantonments is based upon the 1918 requirements at permanent posts, plus a small percentage to allow for increase in rentals, which is \$116,800.

The amount estimated for cantonment requirements is \$1,990,000, which is based on approximately one-half the per capita cost for 1918 multiplied by the number of men in the various cantonments, estimated at 1,296,287. The total under this item is \$2,106,800.

Following is a list showing rentals for which expenditures were made during the fiscal year 1917:

Atlanta, Ga.....	\$7,313.85	Mission, Tex.....	\$1,080.00
Boston, Mass.....	11,400.55	New Orleans, La.....	420.00
Brownsville, Tex.....	12,220.68	Newport News, Va.....	11,200.00
Calexico, Cal.....	675.50	New York, N. Y.....	20,410.90
Charleston, S. C.....	657.50	Nogales, Ariz.....	6,562.50
Columbia, N. Mex.....	914.00	Pharr, Tex.....	761.00
Corpus Christi, Tex.....	1,648.20	Philadelphia, Pa.....	2,979.60
Conna, Tex.....	871.00	Portland, Oreg.....	1,290.27
Douglas, Ariz.....	1,336.00	Richmond, Va.....	470.87
Eagle Pass, Tex.....	750.00	St. Louis, Mo.....	15,119.54
El Paso, Tex.....	52,880.61	San Antonio, Tex.....	54,707.57
Fort Niagara, N. Y.....	440.00	San Benito, Tex.....	351.00
Harlingen, Tex.....	2,269.25	San Francisco, Cal.....	2,377.66
Jackson, Mich.....	570.00	Seattle, Wash.....	2,708.33
Laredo, Tex.....	4,062.65	Washington, D. C.....	13,248.00
Los Angeles, Cal.....	525.00	Miscellaneous.....	1,233.58
Marathon.....	396.00		
McAllen, Tex.....	1,247.51	Total.....	226,895.08
Memphis, Tenn.....	1,200.00		
Mercedes, Tex.....	596.00		

Item: Barracks and quarters 303, rental of offices.
[Estimate, fiscal year 1919, \$1,058,500.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$1,058,500.00	.....	\$1,058,500.00	.....	.....	.....	\$1,058,500.00
Appropriated, fiscal year 1918....	21,400.00	.....	21,400.00	.....	.....	.....	21,400.00
Expended, fiscal year 1917.....	92,228.49	.....	92,228.49	.....	.....	.....	92,228.49

REMARKS.

Services.—The services to be procured under this item consist of the rental of buildings or portions of buildings for use as offices. The estimated cost at stations other than cantonments is based on the 1918 requirements at permanent posts plus a small percentage to allow for increase in rentals which is \$58,500. The amount estimated for cantonments is \$1,000,000, which is based on approximately one-half the per capita cost for 1918 multiplied by the number of men in the various cantonments. The total under this item is \$1,058,500.

The following is the list showing places where office rentals were authorized during the fiscal year 1917:

Albany, N. Y.....	\$1,530.00	Los Angeles, Cal.....	\$316.67
Atlanta, Ga.....	2,681.83	Nagasaki, Japan.....	600.00
Berlin, Germany.....	445.40	New Orleans, La.....	1,891.50
Boston, Mass.....	1,900.00	New York City, N. Y.....	1,084.42
Brownsville, Tex.....	338.88	Nogales, Ariz.....	3,887.98
Charleston, S. C.....	2,259.75	Paris, France.....	1,800.00
Chicago, Ill.....	5,474.74	Portland, Oreg.....	1,460.52
Columbus, N. Mex.....	730.00	Rio de Janeiro, Brazil.....	1,125.00
Copenhagen, Denmark.....	600.00	Rome, Italy.....	750.00
Del Rio, Texas.....	320.00	San Antonio, Tex.....	1,511.50
Douglas, Ariz.....	2,663.78	San Francisco, Cal.....	16,237.58
El Paso, Texas.....	6,540.92	Santiago, Chile.....	990.00
Framingham, Mass.....	1,209.98	Seattle, Wash.....	6,393.98
Habana, Cuba.....	600.00	Tokyo, Japan.....	624.90
Harlingen, Tex.....	701.90	Washington, D. C.....	3,699.67
Holbrook, Ariz.....	299.50	Miscellaneous.....	4,432.53
Honolulu, H. T.....	7,085.00		
Kansas City, Mo.....	8,978.00	Total.....	92,228.49
Laredo, Texas.....	992.56		

Item, barracks and quarters 304.—Rental of buildings for other military purposes.

[Estimate fiscal year 1919, \$201,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$201,000.00	.....	\$201,000.00	.....	.....	.....	\$201,000.00
Appropriated fiscal year 1918.....	4,100.00	.....	4,100.00	.....	.....	.....	4,100.00
Expended fiscal year 1917.....	36,718.79	.....	36,718.79	.....	.....	.....	36,718.79

REMARKS.

The estimate submitted under this item is for rentals in the United States, Hawaiian Islands, etc., except for the Philippines and China which are estimated for under the appropriation "Barracks and Quarters, P. I." The amount estimated for stations other than cantonments is \$11,000 which is a slight increase over the estimated requirements for 1918.

The estimate for the various cantonments is \$190,000 based upon the full strength of the cantonments at the per capita cost for fiscal year 1918.

The total amount under this item is \$201,000. Following is a list of rentals that have been authorized during the fiscal year 1917.

Copper Center, Alaska.....	\$250.00
Harlington, Tex.....	350.67
Llano Grande, Tex.....	121.00
Marfa, Tex.....	240.00
Tientsin, China.....	22,773.00
Miscellaneous.....	12,984.12
Total.....	\$36,718.79

Item barracks and quarters 305—Hire of recruiting stations.

[Estimate Fiscal Year 1919, \$200,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$200,000.00	.....	\$200,000.00	.....	.....	.....	\$200,000.00
Appropriated fiscal year, 1918.....	48,000.00	.....	48,000.00	.....	.....	.....	48,000.00
Expended fiscal year, 1917.....	174,104.56	.....	174,104.56	.....	.....	.....	174,104.56

REMARKS.

The amount estimated under this item is for hire of recruiting stations and auxiliary recruiting stations at various places in the United States and Hawaii, and is based upon the estimated requirements for the fiscal year 1918 plus an additional amount to provide for increased rentals that may be necessary due to war conditions.

Following is a list of the main and auxiliary recruiting stations that were hired during the fiscal year 1917:

Albany, N. Y.....	\$990. 90	New Haven, Conn.....	\$594. 34
Baltimore, Md.....	1, 152. 00	New Orleans, La.....	812. 57
Boston, Mass.....	3, 242. 67	New York City, N. Y.....	9, 179. 19
Buffalo, N. Y.....	1, 395. 93	Oklahoma, Okla.....	631. 40
Charlotte, N. C.....	247. 50	Peoria, Ill.....	549. 33
Chicago, Ill.....	22, 599. 73	Philadelphia, Pa.....	1, 592. 88
Cincinnati, Ohio.....	1, 980. 00	Pittsburgh, Pa.....	840. 00
Cleveland, Ohio.....	1, 435. 88	Portland, Me.....	501. 96
Columbus, Ohio.....	603. 20	Portland, Oreg.....	1, 276. 84
Dallas, Tex.....	1, 421. 33	Providence, R. I.....	1, 104. 00
Davenport, Iowa.....	780. 00	Richmond, Va.....	421. 70
Denver, Colo.....	723. 83	Roanoke, Va.....	899. 67
Detroit, Mich.....	2, 662. 00	Salt Lake City, Utah.....	1, 308. 65
Evansville, Ind.....	583. 00	San Francisco, Cal.....	4, 546. 89
Grand Rapids, Mich.....	1, 017. 50	Savannah, Ga.....	705. 00
Harrisburg, Pa.....	1, 074. 46	Scranton, Pa.....	651. 00
Houston, Tex.....	1, 726. 43	Seattle, Wash.....	738. 50
Hutchinson, Kans.....	180. 00	Spokane, Wash.....	1, 088. 00
Indianapolis, Ind.....	1, 302. 67	Syracuse, N. Y.....	780. 00
Joplin, Mo.....	748. 20	Terre Haute, Ind.....	841. 60
Kansas City, Mo.....	3, 168. 17	Toldeo, Ohio.....	934. 40
Knoxville, Tenn.....	428. 04	Wichita, Kans.....	1, 293. 00
Lexington, Ky.....	1, 044. 00		
Little Rock, Ark.....	660. 00	Total.....	87, 759. 99
Los Angeles, Cal.....	914. 83	Total auxiliary recruit-	
Louisville, Ky.....	1, 892. 80	ing stations.....	86, 344. 57
Memphis, Tenn.....	838. 00		
Nashville, Tenn.....	936. 00	Total.....	174, 104. 56
Newark, N. J.....	720. 00		

Item barracks and quarters 306—Hire of lodgings.

[Estimate, fiscal year 1919, \$243,774.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New con-struction.	Total.	Current require-ments.	New con-struction.	Total	
Estimate.....	\$243, 774. 00	.....	\$243, 774. 00	.....	.....	.....	\$243, 774. 00
Appropriated, fiscal year 1918.....	37, 000. 00	.....	37, 000. 00	.....	.....	.....	37, 000. 00
Expended, fiscal year 1917.....	141, 832. 66	.....	141, 832. 66	.....	.....	.....	141, 832. 66

REMARKS.

Services.—The services to be procured under this item consist of hire of lodgings for recruits and recruiting parties, all of which are chargeable to Class I, non personal funds. Funds for the procurement of these services are apportioned to the various departments and depot quartermasters in lump sum and the services are covered by "Proposal and acceptance agreements." The usual amount paid for lodgings is from 25 to 50 cents per man per night, although lower rates are often obtained when large parties are provided for. Lodgings are also furnished to recruits who have been accepted and are waiting to be sent to the general recruit depots. The estimated amount required at stations other than for cantonment camps is \$243,774, which is an increase over the 1918 estimate of \$153,774, and is due to war conditions.

Item barracks and quarters 307—Furniture.

[Estimated fiscal year 1919, \$100,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$90,000.00	.....	\$90,000.00	\$10,000.00	.....	\$10,000.00	\$100,000.00
Appropriated fiscal year 1918.....	7,600.00	.....	7,600.00	.....	.....	.....	7,600.00
Expended fiscal year 1917.....	50,470.58	.....	50,470.58	.....	.....	.....	50,470.58

REMARKS.

Heavy furniture for officers' quarters and officers' mess is provided for in the appropriation "Barracks and quarters," and the Secretary of War in 1910 approved the following allowances:

For each separate set of married officers' quarters:

- 1 dining-room table.
- 6 dining-room side chairs.
- 2 dining-room armchairs.
- 1 sideboard (where none is built in).
- 1 library desk.
- 2 library armchairs.
- 1 parlor table.
- 1 bookcase.
- 2 chests of drawers.
- 1 kitchen table.
- 2 iron bedsteads for servants.
- 2 library side chairs.
- 1 divan.
- 1 hatrack or hall tree.

For each separate set of field officers' quarters: Same as for each set of married officers', except that an additional bookcase is furnished where none is built in.

For each set of bachelor officers' quarters:

- 1 library desk.
- 1 library armchair.
- 1 parlor table.
- 1 bookcase (except where one is built in).
- 1 chest of drawers.
- 1 iron bedstead.
- 1 hatrack.
- 2 Library side chairs.

For public messes in bachelor officers' quarters for every eight officers, or for less number occupying one building:

- 1 dining-room table.
- 6 dining-room chairs, side.
- 2 dining-room armchairs.
- 2 bookcases.
- 4 library chairs (2 arm and 2 side).
- 2 parlor tables.
- 1 sideboard (where none is built in).
- 1 kitchen table.
- 2 divans.

The same basis is used for supply furniture to the Philippine Islands with the exception that 1 library chair and 1 library rocker is furnished instead of 4 library chairs and no divans are furnished.

Furniture is supplied the Canal Zone on the following approved basis.

For each married officers' quarters:

- 1 dining-room table.
- 8 dining-room chairs.
- 1 sideboard (where none is built in).
- 1 library desk.

For each married officers' quarters—Continued.

- 2 library chairs.
- 2 library chairs, rocker.
- 1 library table.
- 1 bookcase (where none is built in).
- 2 chests of drawers.
- 1 kitchen table.
- 2 iron bedsteads for servants.
- 1 hall tree.

For each set bachelor officers' quarters:

- 1 library table.
- 1 library chair, rocker.
- 2 library chairs.
- 1 library desk.
- 1 chest of drawers.
- 1 iron bedstead.
- 1 hall tree.
- 1 bookcase (where none is built in).

For public messes where eight or less bachelor officers occupy one building:

- 1 dining-room table.
- 8 dining-room chairs.
- 2 bookcases (where none is built in).
- 2 library tables.
- 2 library chairs, rocker.
- 2 library chairs.
- 1 sideboard (where none is built in).
- 1 kitchen table.

Heavy furniture has been furnished in two types—the mahogany type for use in the United States and the quartered white oak or wicker for use in tropics.

No construction is estimated for the fiscal year 1919 which will require this equipment.

In submitting data for the annual estimate for the fiscal year 1919 the commanding general, Philippine Department, reports that during the fiscal year 1917 the sum of \$10,000 was expended for the construction of new furniture required in China, and the Philippine Islands. He requests that a similar sum be included in the estimate for the fiscal year 1919 for said purpose.

During the fiscal year 1917, the following sums were authorized to provide furniture, under contract, to equip officers' quarters:

Oak.....	\$30,585.39
Mahogany.....	19,885.19
Total.....	50,470.58

The following list shows the furniture required in the Hawaiian Department, Canal Zone, and posts pertaining to the United States, according to requisitions received:

HAWAIIAN DEPARTMENT.

81 dining-room tables, at \$10.97 each.....	\$888.57
258 dining-room side chairs, at \$3.59 each.....	926.22
181 dining-room arm chairs, at \$5.76 each.....	1,042.56
66 sideboards, at \$23.94 each.....	1,580.04
54 library desks, at \$18.34 each.....	990.36
119 library arm chairs, at \$8.41 each.....	1,000.79
132 parlor tables, at \$10.97 each.....	1,448.04
93 chests of drawers, at \$12.75 each.....	1,185.75
160 library side chairs, at \$7.65 each.....	1,224.00
40 hall trees, at \$4.23 each.....	169.20
305 bookcases, at \$13.38 each.....	4,080.90
24 kitchen tables, at \$4.94 each.....	118.56
4 iron bedsteads, at \$5 each.....	20.00
14 library tables, at \$6.60 each.....	92.40

14,767.39

CANAL ZONE.

55 dining room tables, at \$10.97 each.....	\$603.35
152 dining room side chairs, at \$3.59 each.....	545.68
152 dining room arm chairs, at \$5.76 each.....	
19 sideboards, at \$23.94 each.....	454.86
24 library desks, at \$18.34 each.....	432.16
2 library arm chairs, at \$8.41 each.....	16.82
2 parlor tables, at \$10.97.....	
45 chests of drawers, at \$12.75 each.....	573.75
99 library side chairs, at \$7.65 each.....	757.35
114 hall trees, at \$4.23 each.....	482.22
136 bookcases, at \$13.38 each.....	1,819.68
33 kitchen tables, at \$4.94 each.....	163.02
210 iron bedsteads, at \$5 each (approximately).....	1,050.00
158 library rockers, at \$9.20 each.....	1,453.60
141 library tables, at \$6.60 each.....	930.60
1 desk, at \$10 each.....	10.00
	<hr/>
	9,293.09

UNITED STATES PROPER.

3 dining room tables, at \$10.97 each.....	\$32.91
18 dining room side chairs, at \$3.59 each.....	64.62
6 dining room arm chairs, at \$5.76 each.....	34.56
3 sideboards, at \$23.94 each.....	71.82
19 library desks, at \$18.34 each.....	348.46
6 library arm chairs, at \$8.41 each.....	50.46
3 parlor tables, at \$10.97 each.....	32.91
6 chests of drawers, at \$12.75 each.....	76.50
19 library side chairs, at \$7.65 each.....	145.55
74 hall trees, at \$4.23 each.....	313.02
22 bookcases, at \$13.38 each.....	294.36
4 kitchen tables, at \$4.94 each.....	19.76
2 iron bedsteads, at \$5 each.....	10.00
	<hr/>
	1,494.93
	<hr/>
Grand total.....	25,555.41

The above prices for heavy furniture are those quoted approximately two years ago. Prices now existing for furniture of this class have nearly doubled. In addition to the number of pieces of furniture listed herewith, many new requisitions have been received, and it is believed that the requirements under this item for the United States will be approximately \$90,000.

The amount estimated for herein totals \$100,000; the amount required for permanent posts in the United States is \$90,000; \$10,000 is also estimated as being required for furniture in China.

Item, barracks and quarters 308—Wall lockers in permanent barracks.

[Estimate, fiscal year 1919, \$50,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$50,000.00		\$50,000.00				\$50,000.00
Appropriated, fiscal year 1918.....	6,100.00		6,100.00				6,100.00
Expended, fiscal year 1917.....	532.12		532.12				532.12

REMARKS.

The supplies purchased under this item consist of metal wall lockers for installation in permanent barracks.

The following statement shows the number of metal wall lockers purchased since they were first authorized and up to and including the fiscal year 1916; also the unit price paid for locker:

Fiscal year.	Number.	Amount.	Fiscal year.	Number.	Amount.
1907.....	2,500	\$11.80	1912.....	4,200	\$8.34
1908.....	8,250	11.80	1913.....	5,502	8.45
1909.....	7,500	8.80	1914.....	None.	.....
1910.....	5,000	8.52	1915.....	4,660	6.99
1911.....	3,500	8.62	1916.....	2,000	11.70

For the fiscal year 1917 the sum of \$532.12 was appropriated for replenishment of stock of metal wall lockers for distribution to military posts upon approved requisitions. Instructions were given the depot quartermaster, Philadelphia, to advertise, and upon opening bids prices were found prohibitive, and all bids were rejected.

In view of the present unsettled condition of affairs with reference to occupancy of posts by troops and the great necessity for conserving all "Barracks and quarters" funds to meet absolutely necessary requirements of the Army, also the high prices of materials entering into the construction of lockers, it was decided not to attempt to make contract for the fiscal year 1917. A considerable number of requisitions are now in this office unfilled, and the sum of \$50,000 is estimated sufficient to meet the requirements for the fiscal year 1919.

United States.—The amount estimated for under this item for permanent posts is \$50,000. This is a considerable increase over the estimated requirements for the fiscal year 1918 and is to provide for increase in cost of material and to meet unfilled calls heretofore made.

Item, barracks and quarters 309—Refrigerators.

[Estimate, fiscal year 1919, \$60,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$50,000.00	.....	\$50,000.00	.....	.....	.....	\$50,000.00
Appropriated, fiscal year 1919.....	3,600.00	.....	3,600.00	.....	.....	.....	3,600.00
Expended, fiscal year 1917.....	40,333.83	.....	40,333.83	.....	.....	.....	40,333.83

REMARKS.

The following table shows the refrigerator which is being purchased under contract for the use of the Army, giving arm of service, ice capacity, and cost per unit, according to last contract, viz:

Battery size, for messes of over 100 men, 74 inches high, 85 inches wide, and 30 inches deep, ice capacity about 560 pounds:

Metal (for Canal Zone and Porto Rican posts).....each.. \$206.00

Wood (for all other posts).....do.... 145.00

Company size, for messes of less than 100 men, 74 inches high, 60 inches wide, 30 inches deep, ice capacity about 450 pounds:

Metal (for Canal Zone and Porto Rican posts).....each.. 157.00

Wood (for all other posts).....do.... 102.00

Officers' size, for officers' quarters and small messes, about 55 inches high, 40 inches wide, and 25 inches deep, ice capacity 150 pounds:

Metal (for Canal Zone and Porto Rican posts).....each.. 69.00

Wood (for all other posts).....do.... 63.83

Noncommissioned officers' refrigerators, for noncommissioned officers' quarters, 52 inches high, 30 inches wide, and 19 inches deep, ice capacity about 75 pounds:

Metal (for Canal Zone and Porto Rican posts).....each.. 35.00

Wood (for all other posts).....do.... 34.38

Supplies.—The supplies to be purchased under this item consist of refrigerators purchased under contract, and also spare parts for refrigerators, such as hinges, locks, casters, linings, etc., used for repairing refrigerators.

United States.—All of the estimated amount will be required to meet current requirements.

The amount estimated under this item for permanent posts is \$10,000. This is a small increase over the estimated requirements for 1917 to allow for increase of cost of material, etc.; \$50,000 is estimated as being required for the various cantonments, based upon half the per capita cost 1918 at permanent posts, making a total under this item of \$60,000.

Items barracks and quarters 310 and 311—Screens, barracks, and quarters.

[Estimate, fiscal year 1919, \$355,300.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$355,300.00	.....	\$355,300.00	.....	.....	.....	\$355,300.00
Appropriated, fiscal year 1918.....	9,200.00	.....	9,200.00	.....	.....	.....	9,200.00
Expended, fiscal year 1917.....	7,362.83	.....	7,362.83	.....	.....	.....	7,362.83

REMARKS.

Supplies.—The supplies to be purchased under this item consist of lumber, wire screening, nails, and other material required in making repairs to screens already installed. These supplies are based on the annual estimates of March 1 and also on special estimates received from time to time. New barracks must be screened, as the specifications for buildings constructed do not include this feature.

Services.—The services to be procured consist of both contract and job services required for the installation of window and door screens.

United States.—The amount estimated will be required to meet current needs.

All posts have been provided with suitable screens in buildings requiring the same. However, much screening is anticipated in the Canal Zone. This is deemed imperative to preserve the health of the troops, and the necessity can not be too strongly emphasized.

Wooden screens, formerly supplied, are gradually being replaced by metal screens as they become unserviceable.

The amount estimated for screen doors and windows at permanent posts is \$25,300, and \$330,000 is estimated as being required for cantonments, based upon the per capita cost for fiscal year 1918 at permanent posts, making a total for this item of \$355,300.

Item barracks and quarters 312—Storm doors and sash for barracks, offices, and quarters,

[Estimate, fiscal year 1919, \$18,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$18,000.00	.....	\$18,000.00	.....	.....	.....	\$18,000.00
Appropriated, fiscal year 1918.....	1,200.00	.....	1,200.00	.....	.....	.....	1,200.00
Expended, fiscal year 1917.....	45.77	.....	43.77	.....	.....	.....	43.77

REMARKS.

Supplies.—The supplies to be procured under this item consist of lumber, nails, glass, etc., required to construct storm doors and sash for buildings where required. Allotments for this purpose usually result in a saving in the fuel bill.

Services.—These are usually performed by contract.

United States.—All of the above amount will be required to meet current needs. The work is generally done by post labor, but frequently when there are a number of buildings, and it is believed that better prices would be obtained by having the work done under contract, the same is advertised and the lowest bid for the best article accepted.

The requirements under this item for storm doors and sash at permanent posts is estimated to be \$3,000, which is a slight increase over the 1918 requirements to allow for increase in cost of material, etc. The amount estimated for cantonments is \$15,000, based upon approximately one-half the per capita cost for fiscal year 1919, making a total for the item of \$18,000.

Item barracks and quarters 313—Window shades for barracks, offices, and quarters.

[Estimate, fiscal year 1919, \$7,250.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$7,250.00	.....	\$7,250.00	.....	.....	.....	\$7,250.00
Appropriated, fiscal year 1918.....	500.00	.....	500.00	.....	.....	.....	500.00
Expended, fiscal year 1917.....	1,625.89	.....	1,625.89	.....	.....	.....	1,625.89

REMARKS.

Supplies.—The supplies to be procured under this item are based on the annual estimates of March 1, where window shades are required to replace those worn out in the service, and upon special requisition where shades are to be installed in new buildings.

The policy of this office is to limit the cost per shade to \$1, including roller fixtures, etc., complete; but they are frequently purchased for a less sum. Specifications therefore required that they be put in place by post carpenter.

United States.—All of the above amount will be required to meet current needs.

The estimated amount applied under the item for window shades at permanent posts is \$1,250, which is a small per cent of increase over the estimated requirements for 1918 to allow for increase in cost of material. The estimated amount for cantonment requirements is \$6,000, making a total of \$7,250 for this item.

Barracks and quarters 314—Flooring and framing for tents.

[Estimate, fiscal year, 1919, \$120,700.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$120,700.00	.....	\$120,700.00	.....	.....	.....	\$120,700.00
Appropriated, fiscal year 1918.....	2,500.00	.....	2,500.00	.....	.....	.....	2,500.00
Expended, fiscal year 1917.....	192,828.61	.....	192,828.61	.....	.....	.....	192,828.61

REMARKS.

Supplies.—The supplies under this item consist of lumber and nails used in the flooring and framing of tents where the same are considered necessary.

The estimated requirements under this item, \$120,700, to provide for tent floors at miscellaneous posts and stations wherever the emergency may arise.

(a) Rentals of office space authorized, showing office for which rented, place, square feet, rate per annum, name and street, location of building, and amount of funds authorized for the rental.

OFFICE SPACE OTHER THAN RECRUITING.

Street and location of building.	Square feet in office.	Rate per annum.	Amount of funds authorized.	Office for which rented.	Lessor's name.
Forsyth Building, rooms 716-721, Atlanta, Ga.	Eighth floor.	\$5,100.00	\$5,100.00	Depot quartermaster	Candler
Forsyth Building, rooms 800-825, Atlanta, Ga.	6 rooms.	1,368.00	1,140.00	do.	Do.
Candler Building, Atlanta, Ga.	246 square feet.	300.00	250.00	Attending surgeon.	Do.
602 Bond Street, Augusta, Ga.	1 floor.	1,300.00	100.00	Offices.	Leagus & Durvall.
40 Murphy Street, Atlanta, Ga.	95,229 square feet.	15,000.00	15,000.00	Mobilization headquarters, Engineer Corps	Woodard Investment Co.
Hurt Building, Atlanta, Ga.	156 square feet.	300.00	275.00	Department laboratory.	Atlanta Realty Co.
Do.	2,318 square feet.	2,520.00	2,380.00	do.	Do.
Trust Building, Baltimore, Md.	2 rooms.	1,600.00	1,000.00	Acting quartermaster	Maryland Trust Building Co.
Buenos Aires, Argentine, 634 Caracas	1 room.	480.00	490.00	Military attaché	Stimson.
25 Huntington Avenue, Boston, Mass.	12,000 square feet.	12,000.00	12,000.00	Headquarters, Northeastern Department	Nottingham Chambers
Do.	1,764.7 square feet.	1.70	2,905.87	do.	Do.
Consumers Co. Building, State and Quincy Streets, Chicago, Ill.	1 room.	600.00	605.00	Mustering officer	Kesner
Do.	30 rooms.	24,940.00	24,940.00	Headquarters, central department	Do.
Piedmont Insurance Building, South Tryon Street, Charlotte, N. C.	4 rooms.	1,000.00	162.00	Camp quartermaster	Piedmont Fire Insurance Co.
Peoples Building, Charleston, S. C.	16,991 square feet.	1.90	12,549.38	Department quartermaster	Peoples National Bank.
Do.	15,490 square feet.	1.90	1,742.625	Headquarters, department quartermaster	Do.
Dearborn Street and Jackson Boulevard, Chicago, Ill.	2 rooms.	636.00	467.00	central department	Monadnock Trust
Do.	3 rooms.	600.00	475.00	do.	Do.
Do.	1 room.	300.00	200.00	do.	Do.
3015 Iron Street, Chicago, Ill.	150,000 square feet.	49,500.00	49,500.00	General depot	National Loan & Exchange Bank
Arcade Building, Columbus, S. C.	3 rooms.	1,000.00	1,000.00	Camp quartermaster	Union National Bank
Union National Bank Building, Caracas and Main Streets, Dolores and Florida Avenue, Douglas, Ariz.	do.	702.00	535.00	City office, military police	Wanted.
Brophy Building, 1049 G. Avenue, Douglas, Ariz.	Entire building.	160.00	190.00	School and office for training camp	Applewhite.
Queen Hotel, Douglas, Ariz.	2 rooms.	540.00	540.00	Intelligence officer	Moore.
Do.	280 square feet.	444.00	444.00	Physician'surgeon	Do.
Mills Building, El Paso, Tex.	3 rooms.	1,800.00	1,800.00	District and base quartermaster	Stevens.
City National Bank, El Paso, Tex.	18 rooms.	6,366.00	6,366.00	Offices, Second Provisional Infantry	City National Bank.
Davenport Bank Bldg. Greenville, S. C.	1 room.	300.00	300.00	Intelligence officer	Gillman
30 York Street, City of New York, Pa.	2 rooms.	180.00	132.50	Headquarters, Military police	Walter.
21-27 Spooner Building, Harrisburg, Pa.	3 rooms.	900.00	26.00	Constructing quartermaster	Spooner.
Alexander Young Building, Honolulu, Hawaii.	do.	600.00	600.00	Disbursing quartermaster	Alex. Young Building Co.
15 Strada Tuma Cosma Jasey, Roumania	28 rooms.	9,045.00	9,045.00	Headquarters, Hawaiian Depot	W. W. Andrews.
Do.	1 room.	240.00	40.00	Office	

Per square foot.

(a) *Rentals of office space authorized, showing office for which rented, place, square feet, rate per annum, name and street, location of building, and amount of funds authorized for the rental—Continued.*

OFFICE SPACE OTHER THAN RECRUITING—Continued.

Street and location of building.	Square feet in office.	Rate per annum.	Amount of funds authorized.	Office for which rented.	Lessor's name.
Scarritt Arcade, 817 Walnut Street, Kansas City, Mo.	2 rooms.	\$504.00	\$504.00	Office of Purchasing Quartermaster	Scarritt Estate Co.
Do.	3 rooms.	774.00	774.00	do.	Do.
New England Life Building, Kansas City, Mo.	1,482 square feet.	1,320.00	1,320.00	Sampling rooms of Quartermaster Corps.	New England Mutual Life Insurance Co.
1801 Houston Street, Laredo, Tex.	1 building.	840.00	840.00	Office district commander.	J. E. Trout.
Central Building, Sixth & Main Streets, Los Angeles, Cal.	2,768 square feet.	3,000.00	2,750.00	Depot quartermaster.	Main Street Co.
Do.	2,154 square feet.	2,200.00	2,200.00	do.	Do.
Georgia Casualty Building, Macon, Ga.	1 room.	180.00	45.00	Office depot quartermaster.	Georgia Casualty Co.
Do.	2 rooms.	360.00	300.00	Offices of depot quartermaster, Camp Wheeler.	Do.
Roble Avenue, Menlo Park, Cal.	1 dwelling house.	540.00	540.00	Office constructing, quartermaster.	Freeman.
Marathon, Tex.	1 adobe.	72.00	72.00	Offices Quartermaster Corps.	McIntyre.
Audubon Building, Canal and Burgundy Streets, New Orleans.	3318 square feet.	3,322.00	3,322.00	do.	Metropolitan Bank.
9 Bund, Oura Nagashi, Japan.	Entire ground floor.	600.00	600.00	Office depot quartermaster.	C. M. Birnk.
332 Marley Avenue, Nogales, Ariz.	8 rooms.	1,200.00	1,200.00	Base Quartermaster and Engineer offices.	First National Bank.
129 Twenty-eighth Street, Newport News, Va.	4 rooms.	420.00	357.00	Office of attending surgeon.	D. A. Dutrow.
810 Broad Street, Newark, N. J.	520 square feet.	800.04	800.04	Offices of disbursing officer.	National State Bank.
302 Broadway, New York City.	5 rooms.	1,000.00	918.63	Intelligence office.	W. V. Astor.
102-108 Broad Street, Manhattan, N. Y.	10,000 square feet.	11.50	16,000.00	do.	New York Telephone Co.
2700 Washington Avenue, Newport News, Va.	3 rooms.	360.00	303.00	Office of dental surgeon.	R. K. Harwood.
2713-15 Washington Avenue, Newport News, Va.	1 room.	150.00	131.00	Telephone switch for embarkation.	First National Bank.
Do.	do.	240.00	203.00	Port of embarkation.	Do.
2715 Washington Avenue, Newport News, Va.	do.	\$100.00	142.50	Port of embarkation offices.	Do.
First National Bank Building, Newport News, Va.	do.	240.00	162.00	Office of casual officer.	Do.
Fulton Building, New York City.	2 rooms.	2,500.00	2,500.00	Signal Corps aeronautical officer.	Fuerst.
Do.	669 square feet.	1,200.00	1,100.00	do.	Do.
Do.	559 square feet.	1,200.00	1,050.00	do.	Do.
Freddie, Tex.	3 rooms.	84.00	84.00	Telegraph office.	Robt. Daly.
15 Rue de Chaillot, Paris, France.	do.	600.00	600.00	Office of military attaché.	Carl Boyd.
Furshadatskaya, 56 Petrograd, Russia.	1 room.	300.00	300.00	do.	Jean Melikoff.
Worcester Building, Third and Oak Streets, Portland, Oreg.	3 rooms.	540.00	540.00	Headquarters, first district Western Department.	Corbett.
Do.	13 rooms.	2,038.00	2,038.00	Sample and office rooms, Quartermaster.	Do.
Via Ventì Settembre, 29, Rome, Italy.	1 room.	300.00	286.00	Office for military attaché.	Obizzo, Bonetti.
Donaboe Building, 86 Battery Street, San Francisco.	4,400 square feet.	1,215.00	304.50	Recruiting purposes. Enlisted Men's Corps.	Donaboe.
815 North Medina Street, San Antonio.	374	420.00	420.00	Office of Medical Corps.	Sealey Stove Fireproof

Building under G. H. & S. A. viaduct, San Antonio, Syracuse University block, Syracuse, N. Y.	1,600 square feet 2 rooms	360.00 720.00	Office in warehouse Office for constructing, Quartermaster.	American warehouse, Syracuse University.
White Building, Seattle, Fourth Avenue and Union Street.	4 rooms	1,440.00	Headquarters, North Pacific Coast Artillery.	Metropolitan Building Co.
Market and Second Streets, San Francisco.	23,424 square feet	33,600.00	Headquarters, Western Department.	Savings Union Bank.
513 Gibbs Building, San Antonio.	1 room	380.00	Quartermaster in charge of construction and repair works.	Gibbs.
Arcade Building, 1308 First Avenue, Seattle, Wash.	28 rooms	6 224.76	Quartermaster Corps and Signal Corps.	Arcade Building Realty Co.
100-1094 West Main Street, Spartanburg, S. C.	3 rooms	12.00	Office in connection with depot quartermaster	Chamber of Commerce.
Monadnock Building, 881 Market Street, San Francisco.	9 rooms	1,560.00	Headquarters South Pacific Coast Artillery.	H. E. Law.
13 Saka-machi, Tsingtan, China	Entire building	210.00	Office of meat inspector	Lamel-Sun.
12 Shinryudocho, Azabu Tokyo, Japan	1 room	600 yen	Office of military attaché.	N. Hashimoto.
1 Enok inkumachi Akasaka Tokyo, Japan	do	600 yen	do	Drabble.
Minsey Building Thirtieth Street and Pennsylvania Avenue Washington D. C.	32 rooms	7 690.96	Aviation Section, Signal Corps.	Minsey Trust Co.
Washington Terminal Station Washington, D. C.	11,929	11,428.96	do	Washington Terminal Co.
Connecticut Avenue and P Street, Washington, D. C.	7,338 square feet	4,500.00	Office and dispensary surgeons	Flannery.
Mills Building, Washington, D. C.	34 rooms	3,300.00	Aviation Section, Signal Corps	A. Carr.
32 Seventh Street N. W., Washington, D. C.	Entire building	2,500.00	Depot quartermaster's office	L. B. and C. G. Blades.
1710 Pennsylvania Avenue, Washington, D. C.	do	2,000.00	Signal Corps laboratory	Overton.
309 Elm Street, Westfield, Mass.	2 top floors	2,400.00	Quartermaster's depot	Allen.

OFFICE SPACE FOR RECRUITING.

7-7 Maumee Street, Adrian, Mich	2 rooms	\$180.00	Recruiting	G. G. Wesley.
Kilbourne Thorne Building, 405 Polk Street, Amarillo, Tex	do	240.00	do	Griffin.
Corner Main and Walnut Streets, Atlat, Okla.	do	240.00	do	Cowan.
Do	1 room	216.00	do	Do.
108-1094 East Main Street, Ardmore, Okla	do	240.00	do	Pennington & Noyes
101 Box Hattie Avenue, Alliance, Nebr	do	300.00	do	J. V. Myers.
Main Street and First Avenue, Aberdeen, S. Dak.	3 rooms	480.00	do	Hatz.
Do	1 room	156.00	do	Do.
2181 Heron Street, Aberdeen, Wash	do	228.00	do	Kelshaw.
1091 Warrister Avenue, Ashland, Ky	do	240.00	do	Haskell.
Alma Mich	do	240.00	do	Bartley.
239 Broadway Albert Lea Minn.	3 rooms	240.00	do	Brunden.
Corner Main and Court Streets, Abington, Va.	do	216.00	do	Denton.
514 Hamilton Street, Alintown, Va	3 rooms	300.00	do	Beldwin.
Eleventh Avenue and Twelfth Street, Altoona, Pa.	3 rooms	420.00	do	Goldachmid.
908 Second Street Alexandria, La	1 room	300.00	do	Petkas.
69 South Main Street Akron Ohio	3 rooms	600.00	do	Citizen's Investment Co.
902 Main Street Anderson, Ind	2 rooms	180.00	do	Anna McGraw.
315 West Second Street, Ashland, Wis	1 room	204.00	do	MacDonald.
14 Baltimore Avenue, Asheville, N. C.	2 rooms	300.00	do	E. C. Greene.
510 Commercial Street, Astoria Ore	1 room	216.00	do	Withers.

1 Per square feet.

(a) Rentals of office space authorized, showing office for which rented, place, square feet, rate per annum, name and street, location of building, and amount of funds authorized for the rental—Continued.

OFFICE SPACE FOR RECRUITING—Continued.

Street and location of building	Square feet in office.	Rate per annum.	Amount of funds authorized.	Office for which rented.	Lessor's name.
Smith Building, Austin, Tex.	2 rooms, 343 square feet.	\$150.00	\$150.00	Recruiting.	Guy A. Collett.
Putney Building, Albany, Ga.	1 room.	216.00	216.00	do.	Putney.
Odd Fellows Building, Auburn Avenue, Atlanta, Ga.	do.	300.00	300.00	do.	Davis.
20 Peachtree Street, Atlanta, Ga.	do.	180.00	180.00	do.	Liggett Co.
110 College Avenue, Athens, Ga.	do.	300.00	300.00	do.	Erwin.
902 Broad Street, Augusta, Ga.	do.	264.00	264.00	do.	Cochran.
1736 Atlantic Avenue, Atlantic City, N. J.	4 rooms.	144.00	144.00	do.	Sheen.
187 Broadway, Albany, N. Y.	2 rooms.	1,100.04	1,100.04	do.	F. P. Dolan.
255 East Main Street, Alliance, Ohio	do.	420.00	77.00	do.	Hurtzell.
600 Congress Avenue, Austin, Tex.	3 rooms.	104.00	164.00	do.	Van Smith.
1408 Nineteenth Street, Bakersfield, Cal.	1 room.	720.00	720.00	do.	Delmont.
Northern National Bank, Bemidji, Minn.	2 rooms.	216.00	216.00	do.	Beacon & White.
6, Main Street, Brattleboro, Vt.	1 room.	240.00	240.00	do.	Crosby.
Sagal Building, 15 Fairfield Avenue, Bridgeport, Conn.	2 rooms.	300.00	300.00	do.	Sagal.
Rexal Drug Store, Brenham, Tex.	do.	180.00	180.00	do.	Schrimacher.
Main and Baylor Streets, Brenham, Tex.	2 rooms.	270.00	270.00	do.	Farmers' National Bank.
Alexander Building, Pearl and Fanning Streets, Beaumont, Tex.	2 rooms, 343 square feet.	270.00	270.00	do.	Beaumont Realty Co.
51 Exchange Street, Bangor, Me.	2 rooms.	300.00	300.00	do.	Hexter.
127 Main Street, Bellefontaine, Ohio.	1 room.	240.00	240.00	do.	Batch.
300 Hotel, Bismarck, N. Dak.	do.	270.00	270.00	do.	Christopher.
401 Princeton Avenue, Bluefield, W. Va.	2 rooms.	300.00	300.00	do.	Thornton Bros.
Bushirk Block, Bloomington, Ill.	do.	120.00	120.00	do.	Livingston Bros.
Shearer Building, Water and Center Streets, Bay City, Mich.	1 room.	300.00	300.00	do.	Le Fravour.
Commercial Street, Belleville, Kan.	do.	180.00	180.00	do.	Stevenson.
Lodgings	do.	do.	do.	do.	Swords.
16 St. Paul Street, Baltimore, Md.	7 rooms.	2,200.00	2,200.00	do.	Glenn.
422 Mill Street, Bristol, Pa.	1 room.	144.00	144.00	do.	Taylor.
215 South Main Street, Burlington, Iowa.	do.	180.00	180.00	do.	Wagner.
First National Bank Building, Hairsville, Pa.	do.	240.00	240.00	do.	First National Bank.
Main and Diamond Streets, Butler, Pa.	do.	300.00	300.00	do.	Butler National Bank.
1108 Seventh Avenue, Beaver Falls, Pa.	2 rooms.	180.00	180.00	do.	White.
Rouman Building, Baton Rouge, La.	1 room.	300.00	300.00	do.	Rouman.
603 Lauro Street, Beaver J. Mill.	do.	240.00	240.00	do.	Hayes.
Third Street and Jefferson Avenue, Bemidji, Minn.	do.	216.00	162.00	do.	Beacon & White.
1014 East Seventh Street, Bedford, Ind.	2 rooms.	180.00	180.00	do.	Bedford Bank.
102 North Center Street, Bloomington, Ill.	do.	216.00	216.00	do.	Bunkirk.
48 Court Street, Birmingham, N.	1 room.	200.00	175.00	do.	Wells.

234 Washington Street, Boston, Mass	do	300.00	300.00	300.00	Hamilton.
34 Causeway Street, Boston, Mass	do	300.00	300.00	300.00	Shapiro.
3 Tremont Row, Boston, Mass	Third floor	3,000.00	3,000.00	3,000.00	Tremont Row
Clark Building, Birmingham, Ala	5 floors	1,500.00	1,500.00	1,500.00	Clark
Fischer Building, Dock and Holly Streets, Belknaptham, Wash	1 room	192.00	192.00	192.00	Fischer
411 Court Street, Healdsburg, Calif	2 rooms	216.00	216.00	216.00	Union State Bank
107 North Main Street, Brockfield, Mo	1 room	240.00	240.00	240.00	Dickinson.
861 Fulton Street, Brooklyn, N. Y.	6 rooms	1,719.96	1,719.96	1,719.96	Lehtenkrass.
112 Flatbush Avenue, Brooklyn, N. Y.	2 rooms	360.00	360.00	360.00	Schwager.
206 Broadway, Brooklyn, N. Y.	5 rooms	600.00	600.00	600.00	Banks.
172 Main Street, Brockton, Mass	1 room	300.00	300.00	300.00	Bryant.
202 298 Main Street, Buffalo, N. Y.	3 rooms	1,500.00	1,500.00	1,500.00	Overturf.
346 Main Street, Buffalo, N. Y.	1 room	300.00	300.00	300.00	White.
1036 Main Street, Boise, Idaho	do	144.00	144.00	144.00	Vienne Rooming House
1133 Main Street, Boise, Idaho	do	228.00	228.00	228.00	Cox.
12 East Main Street, Ionia, Mich	do	360.00	360.00	360.00	McCamby.
1340 Main Street, Ionia, Mich	do	190.00	190.00	190.00	Ladd.
109 Meeting Street, Charleston, S. C.	2 rooms	420.00	420.00	420.00	Riggs.
3191 Chickasha Avenue, Chickasha, Okla	1 room	228.00	228.00	228.00	Smith
141 100 Building, Davis Street and Southern Ry., Culpeper, Va	2 rooms	249.00	249.00	249.00	Lightfoot
410 100 Building, Cleveland, Ohio	15 rooms	3,000.00	3,000.00	3,000.00	Terminal Building Co.
122 Broadway, Centralia, Ill	1 room	180.00	180.00	180.00	J. S. Davis.
3024 Chestnut Avenue, Chickasha, Okla	2 rooms	300.00	300.00	300.00	Chick, Aerie No. 2090.
Third Street and Second Avenue, Cedar Rapids, Iowa	do	300.00	300.00	300.00	Marlin Dry Goods.
113 Baltimore Street, Cumberland, Md	do	336.00	336.00	336.00	Worthelma.
Tower Avenue and Magnolia Street, Centralia, Wash.	do	264.00	264.00	264.00	Michigan Avenue.
Butcher Building, 92 East Fifth Street, Coffeyville, Kans	do	300.00	300.00	300.00	Centralia State Bank.
601 Kansas Street, Charleston, W. Va	1 room	180.00	180.00	180.00	Ethen
61 West Madison Street, Chicago, Ill	10 rooms	2,000.00	2,000.00	2,000.00	Anderson
Main and Walnut Streets, Champaign, Ill.	2 rooms	210.00	210.00	210.00	Wengarten.
Waller Building, Center Street, Corbin, Ky	1 room	156.00	156.00	156.00	J. P. Wilder
181 Lake Street, Lexington, Ky	2 rooms	300.00	300.00	300.00	Dressman & Co.
302 East Main Street, Hamlet, Ky	do	180.00	180.00	180.00	Hurt.
1114 South Mitchell Street, Channahon, Mich	1 room	240.00	240.00	240.00	Cassler
140 Main Street, Linton, Ind	2 rooms	240.00	240.00	240.00	Fry.
155 South Broadway, Charlottesville, Va	do	300.00	300.00	300.00	Carter.
235 East Main Street, Crookston, Minn	3 rooms	240.00	240.00	240.00	Bertelson
257 Market Street, Coatesville, Pa	2 rooms	400.00	400.00	400.00	Pownall.
Memorial Square, Chambersburg, Pa	do	400.00	400.00	400.00	Market.
311-317 Superior Avenue, Cleveland, Ohio	1 room	324.00	324.00	324.00	Democratic League.
113 North Third Street, Chillicothe, Ohio	do	180.00	180.00	180.00	H. Kelley, Art. Found
108 West Fourth Street, Cincinnati, Ohio	do	120.00	120.00	120.00	Johnson.
119 East Fawcett Street, Canton, Ohio	4 rooms	600.00	600.00	600.00	Mummet.
612 Vine Street, Cincinnati, Ohio	2 floors	2,400.00	2,400.00	2,400.00	Timken.
626 S. 11th Street, Chicago, Ill	5 floors	7,200.00	7,200.00	7,200.00	Frankel.
40 North Fifth Avenue, Chicago, Ill	2 rooms	744.00	744.00	744.00	Kerfort.
Chicago	do	240.00	240.00	240.00	Esport.
First Street, Cresson, Pa	1 room	240.00	240.00	240.00	Thompson.
					Eberly

(a) Rentals of office space authorized, showing office for which rented, place, square feet, rate per annum, name and street, location of building, and amount of funds authorized for the rental—Continued

OFFICE SPACE FOR RECRUITING—Continued

Street and location of building.	Square feet in office.	Rate per annum.	Amount of funds authorized.	Office for which rented.	Lessor's name.
511 Superior Avenue, Cleveland, Ohio.	Window.	\$120.00	\$120.00	Recruiting.	Hall.
504 Superior Avenue, Cleveland, Ohio.	1 window.	120.00	120.00	do.	Shields.
9 Popular Street, Cambridge, Md.	1 room.	216.00	216.00	do.	Vane.
5084 Central Avenue, Connersville, Ind.	2 rooms.	186.00	186.00	do.	Heirs.
3124 Washington Street, Columbus, Ind.	do.	180.00	180.00	do.	Rosenbush.
216 Arch Street, Cloquet, Minn.	3 rooms.	192.00	192.00	do.	Markowitz.
513 Ohio Street, Cairo, Ill.	1 room.	180.00	180.00	do.	Osterlich.
Marletta and Main Streets, Canton, N. C.	do.	240.00	240.00	do.	Craig.
Irwin Building, Clarksburg, W. Va.	do.	180.00	180.00	do.	Irwin.
317 Chaparral Street, Corpus Christi, Tex.	1 room, 220 square feet.	210.00	210.00	do.	Thomas.
Chicago, Ill.	2 rooms.	840.00	840.00	do.	Penn Garden Mission.
123 125 East Bay Street, Charleston, S. C.	do.	420.00	420.00	do.	Selby & Fer.
1522 Main Street, Columbia, S. C.	1 room.	180.00	180.00	do.	Taylor.
Franklin Street, Clarksville, Tenn.	do.	180.00	180.00	do.	Bringham.
201 West Seventh Street, Columbia, Tenn.	do.	180.00	180.00	do.	Columbia Bank & Trust Co.
Chicago, Ill.	2 rooms.	300.00	300.00	do.	Polish Roman Catholic Church.
540 Federal Street, Camden, N. J.	1 room.	360.00	360.00	do.	Frost Bros.
218 West Lincoln Highway, Cheyenne, Wyo.	do.	240.00	240.00	do.	Warren Mercantile Co.
202 E. 11th Street, Colorado Springs.	do.	168.00	168.00	do.	First National Bank.
Fourth Street and Broadway, Chicago, Cal.	2 rooms.	300.00	300.00	do.	Waterland.
8420 Broadway, Cleveland, Ohio.	2 rooms.	180.00	180.00	do.	Murphy.
20 East Eighth Street, Chattanooga, Tenn.	do.	140.00	140.00	do.	Loveman.
Overtown Building, Colwyn Street, Cumberland Gap, Tenn.	2 rooms, 360 square feet.	47.25	47.25	do.	Overtown.
Rivers Building, Tenth Street and H Avenue, Poughkeepsie, N. Y.	1 room.	312.00	312.00	do.	Dixon & Co.
115 South Front Street, Dowagiac, Mich.	10 rooms.	1,200.00	1,200.00	do.	Geo. Gebhardt.
1706 Lawrence Street, Denver, Colo.	1 room.	12.00	12.00	do.	Ricco.
Main Avenue, Durango, Colo.	2 rooms.	180.00	180.00	do.	Durango Exchange.
Cannon Building, Duluth, Minn.	2 rooms, 720 square feet.	672.00	672.00	do.	Smith & Wailes.
1613 Main Street, Dallas, Tex.	1 room.	180.00	180.00	do.	Central State Bank.
2021 West Main Street, Denison, Tex.	do.	144.00	144.00	do.	John F. Arzner.
603 Main Street, Dallas, Tex.	do.	900.00	900.00	do.	Oechfle.
1514 Main Street, Dallas, Tex.	4 rooms.	300.00	300.00	do.	Wilson.
1194 Bank Street, Decatur, Ala.	1 room.	120.00	120.00	do.	Milligan.
141 Foster Street, Dothan, Ala.	do.	240.00	240.00	do.	Walker.
311 Long Avenue, Dubois, Pa.	do.	2,400.00	2,400.00	do.	McDonald.
221 Woodward Avenue, Detroit, Mich.	2 rooms.	360.00	360.00	do.	Golden.
114 Gratiot Avenue, Detroit, Mich.	2 rooms.	360.00	360.00	do.	Tyngel.

Second and Brady Streets, Davenport, Iowa	4 rooms	950.00	do	Hickey,
Eighth and Main Streets, Dubuque, Iowa	1 room	180.00	do	Wagel,
228 Main Street, Panyville, Va	2 rooms	300.00	do	Weddell Holland,
61 Fort Street, Detroit, Mich	1 room	480.00	do	Owen,
34 North Vermillion Street, Danville, Ill.	2 rooms	160.00	do	Deutsch,
126 East Main Street, Decatur, Ill	do	300.00	do	Bachneck,
First and Chestnut Streets, Dodge City, Kan.	1 room	192.00	do	Argent,
Superior Street and Fifth Avenue, Duluth, Minn.	5 rooms	360.00	do	Little & Nolte
323 1/2 Clinton Street, Defiance, Ohio	1 room	240.00	do	Home & Saving
207 1/2 Xth Avenue, Des Moines, Iowa	4 rooms	480.00	do	City Realty Co
208 Lockman Street, Dover, Del	1 room	25.34	do	Curry,
1091 West Randolph Street, Fnd., Okla	do	240.00	do	Gannon-Goulding
215 T Street, Eureka, Cal	do	336.00	do	Metropole
55 Broad Street, Elizabeth, N J	2 rooms	204.00	do	Cleveland
301 Locust Street, Eldorado, Ill.	1 room	180.00	do	Latham
1013 State Street, Erie, Pa	2 rooms	420.00	do	Wingardier
207 De Moss Avenue, East Grand Forks, Minn	1 room	240.00	do	Sullivan
604 1/2 South Main Street, Elkhart, Ind	do	216.00	do	Anderson
1401 1/2 Hewitt Avenue, Everett, Wash	do	144.00	do	Peterson
Herald Building, San Francisco, and El Paso, El Paso, Tex	3 rooms	720.00	do	Herald Building,
624 Main Street, Evansville, Ind	4 rooms	540.00	do	Willard,
813 Fellington Street, Escanaba, Mich	1 room and 1 floor	1,200.00	do	Clary,
36 Doyor Street, Easton, Md.	1 room	180.00	do	Clark,
1 Barstow Street, Fairport, Wis	2 rooms	300.00	do	Drummond,
320 West Sixth Street, East Liverpool, Ohio	do	336.00	do	Little,
Payson and Jackson Streets, Ells, Kans.	1 room	180.00	do	Hickey,
Fifth and W. Main Street, Eugene, Oreg.	2 rooms	240.00	do	Mallock
1033 I Street, Fresno, Cal	do	402.00	do	Reed,
Lot No 2 block N J 2, Freeport, Tex	1 building	240.00	do	Carlton,
Borden Blocks, South Main Street, Fall River, Mass.	1 room	360.00	do	Dunn,
440 Main Street, Fitchburg, Mass	do	240.00	do	Merriman
Hyers Building, Jock First Seventh Street, Fort Worth, Tex	do	228.00	do	Van Tuyl,
Church and Market Streets, Frederick, Md	do	240.00	do	Central Trust Co
111 Lincoln Avenue, Fortis Falls, Minn	do	240.00	do	Kaddatz,
421 1/2 North Broadway Street, Fort Mich	2 rooms	300.00	do	Hibbard
3 North Main Street, Fort Scott, Kans	1 room	192.00	do	Babney,
324 First Street, Fargo, N Dak	do	192.00	do	Bolene,
128 Central Avenue, Fort Dodge, Iowa	2 rooms	432.00	do	First Trust & Savings Bank
36 Main Street, Forrest City, N C	1 room	180.00	do	Moore
127 1/2 Main Street, Fort Worth, Tex	2 rooms	240.00	do	Byers,
726 Broadway, Gary, Ind	do	270.00	do	Honan,
4 Jackson Street, Greencastle, Ind	1 room	180.00	do	Foxworthy,
Fourteenth Street and Twenty-seventh Avenue, Gulfport, Miss	do	150.00	do	Blenlog,
148 East Main Street, Gulfport, Miss	do	192.00	do	Holmes,
Wheeler Avenue and Third Street, Grand Island, Nebr.	2 rooms	312.00	do	Roth,
202 1/2 Sixth Street, Grants Pass, Oreg	1 room	216.00	do	Riddle,
Main and Patsburg, Greensburg, Ind	2 rooms	300.00	do	Barclay,
Moan and Franklin, Greensburg, Ind	1 room	156.00	do	Dannacher,
726 Broadway, Gary, Ind	2 rooms	270.00	do	Welch,
326 South Elm Street, Greensboro, N C	8 rooms	600.00	do	Valentine,

(a) *Rentals of office space authorized, showing office for which rented, place, square feet, rate per annum, name and street, location of building, and amount of funds authorized for the rental.*—Continued.

OFFICE SPACE FOR RECRUITING—Continued.

Street and location of building.	Square feet in office.	Rate per annum.	Amount of funds authorized.	Office for which rented.	Lessor's name.
Trust Building, corner Post Office and Tremont Streets, Galveston, Tex.	2 rooms.	\$330.00	\$330.00	Recruiting.	Blum.
1154 South Main Street, Greenville, S. C.	do.	300.00	300.00	do.	Gillman.
Monroe Avenue, Grand Rapids, Mich.	6 rooms.	1,200.00	1,200.00	do.	Crowell.
23 Seneca Street, Geneva, N. Y.	3 rooms.	215.00	215.00	do.	Long.
29 Canon Block, Fourth and Main Streets, Grand Junction, Colo.	1 room.	180.00	180.00	do.	Canon Block & Inv. Co.
Corner Main and Thernis Streets, Cape Girardeau, Mo.	3 rooms.	420.00	420.00	do.	Houck.
501 Roane Street, Harrison, Tenn.	1 room.	120.00	120.00	do.	Smith.
215 South Main Street, Hannibal, Mo.	2 rooms.	300.00	300.00	do.	Price.
221 Market Street, Harrisburg, Pa.	1 room.	900.00	900.00	do.	George.
78 Main Street, Home, N. Y.	2 rooms.	300.00	300.00	do.	Hollands.
212 Washington Street, Hoboken, N. J.	1 room.	312.00	312.00	do.	Cohen.
Marks Building, 430 Wynton Street, Hartford, Conn.	2 rooms.	420.00	420.00	do.	Marks.
Blins Building, Main Street and Texas Avenue, Houston, Tex.	4 rooms (626 sq. ft.).	1,200.00	1,200.00	do.	Blins & Settlement.
Blins Building and Main Street, Houston, Tex.	2 rooms (362 sq. ft.).	300.00	300.00	do.	Do.
136 West Broad Street, Lancaster, Pa.	1 room.	180.00	180.00	do.	Glover.
327 South Hobman Street, Hammond, Ind.	do.	300.00	300.00	do.	Huehn.
Main Street, Hartford City, Ind.	2 rooms.	120.00	120.00	do.	Stevenson.
408 Third Avenue, Hibbing, Minn.	1 room.	300.00	300.00	do.	Donoghue.
Fourth and Main Streets, Huntington, Ind.	do.	84.00	84.00	do.	First National Bank.
8014 West Seventh Street, Hastings, Neb.	do.	215.00	215.00	do.	Cramen.
24 South Fourth Street, Hagerstown, Md.	do.	180.00	180.00	do.	Willson & Nicely.
Third and High Streets, Hamilton, Ohio	do.	188.00	188.00	do.	Stroble.
325 Market Street, Harrisburg, Pa.	4 rooms.	1,800.00	1,800.00	do.	Strouse.
304 South Main Street, Hillsboro, Ill.	1 room.	144.00	144.00	do.	White.
Robeson-Prichard Building, Ninth Street, Huntington, W. Va.	2 rooms.	384.00	384.00	do.	Robeson & Richard.
24 South Main Street, Hutchinson, Kans.	do.	300.00	300.00	do.	Whitledge.
Huron, S. Dak.	1 room.	300.00	300.00	do.	Wilmarth.
Proper's Bank Building, Main and East Market Streets, Harrisburg, Va.	2 rooms.	300.00	300.00	do.	Peoples' Bank.
Union Square and Federal Streets, Hickory, N. C.	do.	180.00	180.00	do.	Shuford.
Haitesburg, Mass. (McInnis Bldg.)	1 room.	180.00	180.00	do.	Watts.
110 East Main Street, Jackson, Mich.	3 rooms.	288.00	288.00	do.	Jacobson.
107 East Main Street, Jackson, Mich.	1 room.	300.00	300.00	do.	Phillips.
123 Buffalo Street, Johnson City, Tenn.	2 rooms.	276.00	276.00	do.	American Trust Co.
53-57 West Hay Street, Jacksonville, Fla.	4 rooms.	840.00	840.00	do.	Goldstein.
209 Main Street, Jonesboro, Ark.	1 room.	480.00	480.00	do.	Rowland.
414 Jackson Avenue, Jersey City, N. J.	do.	480.00	480.00	do.	Rowland.

102 Newark Avenue, Jersey City, N. J.	do.	300.00	300.00	Norton.
1124 Liberty Street, Jackson, Tenn.	do.	144.00	144.00	Stovall.
402 Third Street, International Falls, Minn.	do.	144.00	144.00	Wedlund.
24 South Elms Street, Indianapolis, Ind.	do.	1,200.00	1,200.00	Jennings.
3401 Michigan Avenue, Indian Harbor, Ind.	do.	180.00	180.00	Dupes.
102 North Elm and Street, Ironton, Ohio	do.	180.00	180.00	Brammer & Canford.
414 Main Street, Johnstown, Pa.	do.	300.00	300.00	Hager.
416 Main Street, Joplin, Mo.	5 rooms	900.00	900.00	Nolan.
3024 West Capitol, Jackson, Miss.	4 rooms	600.00	600.00	McRae.
241 North Minnesota Avenue, Kansas City, Kans.	1 room	\$300.00	\$300.00	Meriwether.
Sedgewick Building, Knoxville, Tenn.	4 rooms	534.00	534.00	Brownlow.
503 North Franklin Street, Knoxville, Mo.	1 room	300.00	300.00	Elizaville Real Estate Co.
Hall Building, Ninth and Walnut Streets, Kansas City, Mo.	do.	300.00	300.00	Hall.
3024 North Main Street, Kokomo, Ind.	do.	180.00	180.00	Keck.
Court Street and Schuyler Avenue, Kankakee, Ill.	do.	156.00	156.00	Bereckes.
122 West Main Street, Kalamazoo, Mich.	do.	300.00	300.00	Doyle.
Main Street, Lawton, Kans.	do.	180.00	180.00	Ewell.
809 North Queen Street, Lawton, N. C.	do.	180.00	180.00	Dixon.
831 Walnut Street, Produce Exchange Building, Kansas City, Mo.	do.	240.00	240.00	Produce Exchange Building.
729 Main Street, Kansas City, Mo.	2 rooms	330.00	330.00	New York Life Insurance Co.
403 East Twelfth Street, Kansas City, Mo.	Entire floor	3,540.00	3,540.00	Houlehan.
Netessing and Court Street, Lapeer, Mich.	3 rooms	180.00	180.00	Elde.
Main and Market, Little Rock, Ark.	5 rooms	804.00	804.00	Union Trust Co.
1010 Main Street, Lexington, Mo.	1 room	240.00	240.00	Wright.
Fourth and Delaware Streets, Lewisworth, Kans.	2 rooms	216.00	216.00	Ummuthen.
224 West First Street, La Junta, Colo.	1 room	240.00	240.00	Wilson.
343 Center Street, Lynn, Mass.	do.	300.00	300.00	Jones.
238 Central Street, Lowell, Mass.	do.	216.00	216.00	Simpson.
201 Elm Street, Lumberton, N. C.	2 rooms	300.00	300.00	Lumberton Cotton Mill.
306 Main Street, Lafayette, Ind.	1 room	180.00	180.00	Westfall.
4201 East Market Street, Logansport, Ind.	2 rooms	192.00	192.00	Ferguson.
849 Fernando Building, Fourth and Main Streets, Los Angeles, Cal.	1 room	210.00	210.00	Lanherhim.
Do.	do.	210.00	210.00	Do.
Do.	do.	720.00	720.00	Do.
100 West Jefferson Street, Louisville, Ky.	3 rooms	2,100.00	2,100.00	Fidelity & Trust Co.
715 Ryan Street, Lake Charles, La.	Entire building	do.	do.	Levy.
103 North Queen Street, Lancaster, Pa.	2 rooms	240.00	240.00	Grebe.
Pickett Street, Lebanon, Mo.	do.	240.00	240.00	Rep. G. committees.
62 East Broadway, Little Falls, Minn.	1 room	180.00	180.00	Brown.
Commerce and Jefferson Streets, Lebanon, Mo.	do.	192.00	192.00	Langweller.
1174 East Michigan, Lansing, Mich.	do.	300.00	300.00	Electric Equipment Co.
139 Main Street, Lexington, Ky.	do.	1,200.00	1,200.00	Lexington Light Co.
1001 Main Street, Lynchburg, Va.	2 floors	300.00	300.00	Scott.
208 Kansas Avenue, Liberal, Kans.	1 room	180.00	180.00	Thompson.
238 Center Street, Marion, Ohio	do.	180.00	180.00	Marion I. O. O. F.
328 Franklin Street, Michigan City, Ind.	Suite No. 2	168.00	168.00	Carow.
301 Wells Street, Milwaukee, Wis.	1 room	1,020.00	1,020.00	N. J. Theater Co.
10 D Slard Street, Monroe, La.	6 rooms	300.00	300.00	Wexler & Max.
112 First Avenue, Mourahead, Minn.	2 rooms	240.00	240.00	Christianson.
Higgins Avenue and Main Street, Missoula, Mont.	do.	180.00	180.00	Bladenberg Realty Co.
1 room	do.	180.00	180.00	

ARMY APPROPRIATION BILL, 1910.

(a) Rentals of office space authorized, showing office for which rented, place, square feet, rate per annum, name and street, location of building, and amount of funds authorized for the rental—Continued.

OFFICE SPACE OR RECRUITING—Continued.

Street and location of building.	Square feet in office.	Rate per annum.	Amount of funds authorized.	Office for which rented.	Lessor's name.
107 South Front Street, Mankato, Minn.	2 rooms.	\$300.00	\$300.00	Recruiting.	Steiner.
1719 Broadway, Mattoon, Ill.	1 room.	192.00	192.00	do.	Holmes.
380 River Street, Manistee, Mich.	2 rooms.	240.00	240.00	do.	Beymour
100 South Main Street, Minot, N. Dak.	1 room.	264.00	264.00	do.	Ed.
164 South Federal Street, Mason City, Iowa.	2 rooms.	300.00	300.00	do.	Wood.
19 North Main Street, Marshalltown, Iowa.	do.	300.00	300.00	do.	Marshalltown State Bank
2 South Carroll Street, Madison, Wis.	do.	300.00	300.00	do.	Boyd Co
134 East Choctaw Avenue, McAlester, Okla.	do.	300.00	300.00	do.	Jones.
1016 Walnut Street, Murphysboro, Ill.	1 room.	216.00	216.00	do.	aymond.
50 Western Avenue, Muskegon, Mich.	do.	180.00	180.00	do.	Anthony.
22004 Fourth Street, Meridian, Miss.	do.	300.00	300.00	do.	Ormond
697 Elm Street, Manchester, N. H.	do.	240.00	240.00	do.	Lee.
571 Cherry Street, Mason, Ga.	2 rooms.	300.00	300.00	do.	West.
2054 Reed Street, Moberly, Mo.	3 rooms.	300.00	300.00	do.	Sparks.
537 Main Street, Morced, Cal.	1 room.	180.00	180.00	do.	Stauffer.
84 Third Street, Maryville, Mo.	2 rooms.	240.00	240.00	do.	Schanck.
Holt Building, Montgomery, Ala.	1 room.	264.00	264.00	do.	Holt.
1164 Broadway, McKenzie, Tenn.	do.	66.00	66.00	do.	Sued.
126 North Court Avenue, Memphis, Tenn.	4 rooms.	1,020.00	1,020.00	do.	Southern Express Co.
217 Dauphin Street, Mobile, Ala.	2 rooms.	300.00	300.00	do.	McGill Institute.
125 South Front Street, Mankato, Minn.	do.	300.00	300.00	do.	F. Stiffe.
23 Broadway, Mauch Chunk, Pa.	1 room.	180.00	180.00	do.	Craig.
2084 South Walnut Street, Muncie, Ind.	do.	180.00	180.00	do.	Home Motion Picture Co.
Main and West Streets, Madison, Ind.	3 rooms.	180.00	180.00	do.	Bauer.
Fourth and Adams Streets, Marion, Ind.	do.	180.00	180.00	do.	Matter.
13104 Broad Street, New Castle, Ind.	do.	192.00	192.00	do.	Mouch.
214 Main Street, New Castle, Ind.	2 rooms.	192.00	192.00	do.	Clift.
6224 Broadway, Nashville, Tenn.	8 rooms.	1,140.00	1,140.00	do.	Webb.
165 Main Street, Nashville, N. H.	1 room.	72.00	72.00	do.	Winn.
127 Grand Street, Norfolk, Va.	do.	120.00	120.00	do.	Townburg Corporation.
Napa Hotel, First and Main Streets, Napa, Colo.	do.	240.00	240.00	do.	The Napa Hotel.
412 Norfolk Avenue, Norfolk, Nebr.	2 rooms.	300.00	300.00	do.	Ludwig.
Corner Main and State Streets, Norton, Kans.	1 room.	180.00	180.00	do.	Hamilton.
217 Main Street, Niles, Mich.	do.	240.00	240.00	do.	Calvin Bros.
337 Charles Street, New Orleans, La.	3 rooms.	900.00	900.00	do.	Grand Lodge F. A. & A. M., Sta of Louisiana.
903 Howard Avenue, New Orleans, La.	3 rooms.	240.00	240.00	do.	Mascard.
Washington Hotel, North Yakima, Wash.	1 room.	240.00	240.00	do.	Mullins.
245 West One hundred and twenty-fifth Street, New York, N. Y.	9 rooms.	480.00	480.00	do.	Oohen

646 Third Avenue, New York, N. Y.	do.	420.00	420.00	Wachter.
142 East Fourteenth Street, New York, N. Y.	1 room.	240.00	240.00	Hirschfeld.
115 Falls Street, Niagara Falls, N. Y.	do.	240.00	240.00	Lunch.
240 Broadway, 23 Chamber Street, New York, N. Y.	6 rooms.	5,000.00	5,000.00	Harris.
240 East Fifty-ninth Street, New York, N. Y.	1 room.	480.00	480.00	Bloomington Ave.
400 East one hundred and forty-ninth Street, New York, N. Y.	do.	600.00	600.00	United Cigar Stores of America.
80 84 Delany Street, New York, N. Y.	2 rooms.	300.00	300.00	Klein.
38 East Twenty-third Street, New York, N. Y.	1 room.	300.00	300.00	Breese.
76 Bowery, New York, N. Y.	do.	300.00	300.00	Baumann & Sons.
150 East one hundred and twenty-fifth Street, New York City, N. Y.	do.	300.00	300.00	Kopper.
954 Chapel Street, New Haven, Conn.	2 rooms.	300.00	300.00	Starlin.
Goldsmith Block, 85 State Street, New London, Conn.	1 room.	312.00	312.00	Goldsmith.
956 Chapel Street, New Haven, Conn.	3 rooms.	1,800.00	1,800.00	Starlin.
110 West Street, New York, N. Y.	1 room.	480.00	480.00	Stuyvesant Real Estate Co.
New Karolsburg Block, North Adams, Mass.	2 rooms.	240.00	240.00	Bond.
76 Main Street, Northampton, Mass.	1 room.	180.00	180.00	Sherwin.
1931 Broadway, New York, N. Y.	do.	300.00	300.00	Rallon Construction Co.
113 West Twenty-third Street, New York, N. Y.	do.	420.00	420.00	Laidley.
114 Eighth Avenue, New York, N. Y.	do.	456.00	456.00	Massucci.
729 Sixth Avenue, New York, N. Y.	6 rooms.	2,940.00	2,940.00	McDermott.
2104 Fifth Avenue, New York, N. Y.	1 room.	312.00	312.00	Hagmayer.
200 West Thirtieth Street, New York, N. Y.	do.	132.00	132.00	Terminal Leasing Co.
117 South Orange Avenue, Orlando, Fla.	2 rooms.	282.00	282.00	McElroy.
909 Broadway, Oakland, Cal.	do.	300.00	300.00	Whitaker.
10 North Main Street, Olean, N. Y.	1 room.	240.00	240.00	City of Olean Building.
232 Second Street, Oil City, Pa.	2 rooms.	180.00	180.00	Veech.
Market and Second Streets, Ottumwa, Iowa.	1 room.	300.00	300.00	Laighton McNett.
176 Main Street, Oronota, N. Y.	do.	240.00	240.00	Yagel.
120 North Union Avenue, Pueblo, Colo.	do.	300.00	300.00	McGovern.
150 North Street, Pittsfield, Mass.	do.	180.00	180.00	Shipton.
215 Main Avenue, Passaic, N. J.	do.	180.00	180.00	Campbell & Morrell Co.
130 South Street, Perth Amboy, N. J.	do.	360.00	360.00	First National Bank.
269 Main Street, Paterson, N. J.	2 rooms.	1,500.00	1,500.00	Brewer.
Cassat Mason Building, corner Westminster and Empire Streets, Providence, R. I.	6 rooms.	432.00	432.00	Misch.
301 South Main Street, Poplar Hill, Mo.	3 rooms.	150.00	150.00	State Bank of Poplar Bluff.
Golden Rule Hotel, Price, Utah.	1 room.	132.00	132.00	Golden Rule Hotel.
304 South Palfox Street, Pensacola, Fla.	do.	1,080.00	1,080.00	Flaher Rental Agency.
Warrenter Building, Third and Oak Streets, Portland, Oreg.	5 rooms.	180.00	180.00	Corbett.
229 North Second Street, Petersburg, Va.	1 room.	144.00	144.00	Hall.
corner Main and Maridan Portland, Ind.	2 rooms.	420.00	420.00	White.
102 North Centre Street, Pottsville, Pa.	do.	252.00	252.00	McKinstry.
Palbot Building, First Avenue and Adams Street, Phoenix, Ariz.	1 room.	1,500.00	1,500.00	Lantz.
627 Smith Building, Pittsburgh, Pa.	2 rooms.	144.00	144.00	Schmidt.
Curley Building, Portsmouth, Ohio.	1 room.	1,828.00	1,828.00	Turley Realty Co.
484 High Street, Portstown, Pa.	do.	300.00	300.00	Sellinger.
229 Arch Street, Philadelphia, Pa.	6 rooms.	1,828.00	1,828.00	McVey.
412 Mitchell Street, Petoskey, Mich.	3 rooms.	300.00	300.00	Davis.

(a) *Rentals of office space authorized, showing office for which rented, place, square feet, rate per annum, name and street, location of building, and amount of funds authorized for the rental—Continued.*

OFFICE SPACE FOR RECRUITING—Continued.

Street and location of building.	Square feet in office.	Rate per annum.	Amount of funds authorized.	Office for which rented.	Lessor's name.
305 North Broadway, Pittsburg, Kans.	2 rooms.	\$360.00	\$360.00	Recruiting.	Graves.
1829 Main Street, Parsons, Kans.	do.	240.00	240.00	do.	Van Meter.
1204 North Fifth Street, Quincy, Ill.	do.	300.00	300.00	do.	Weiler Bros.
3104 Market Street, Parkersburg, W. Va.	1 room.	156.00	156.00	do.	V. O. Smith and estate.
Zimmerman Building, corner Franklin and Adams, Peoria, Ill.	5 rooms.	720.00	720.00	do.	Zimmerman.
Second and Burnside Streets, Portland, Oreg.	1 room.	150.00	150.00	do.	Waller.
Worcester Building, Third and Oak Streets, Portland, Oreg.	do.	165.00	165.00	do.	Corbett.
627 South Main Street, Pendleton, Oreg.	do.	228.00	228.00	do.	Brown.
330 Main Street, Poughkeepsie, N. Y.	Entire floor.	600.00	600.00	do.	Carpenter & Parrish.
Pennsylvania Railroad Building, Phillipsburg, N. J.	1 room.	120.00	120.00	do.	Piereson.
19 Monument Square, Portland, Me.	2 rooms.	550.00	550.00	do.	Baxter.
182 Trade Street, Rock Hill, S. C.	do.	264.00	176.00	do.	H. Carlson.
2 Center Street, Rutland, Vt.	do.	420.00	420.00	do.	Suttle.
251 North Virginia Street, Reno, Nev.	1 room.	240.00	240.00	do.	Henz.
317 Market Street, Redding, Cal.	do.	264.00	264.00	do.	Jacobs.
30 East Main Street, Rochester, N. Y.	2 rooms.	600.00	600.00	do.	North.
820 East Broad Street, Richmond, Va.	2 flats.	300.00	300.00	do.	McVeigh.
304 South Fayette Street, Raleigh, N. C.	2 rooms.	240.00	240.00	do.	Woodward.
711 Main Street, Rochester, Ind.	1 room.	192.00	192.00	do.	Guliland.
536 Main Street, Richmond, Va.	do.	262.00	252.00	do.	Palgo.
216 South Main Street, Rockford, Ill.	do.	360.00	360.00	do.	Rockford Brewing Co.
619 Penn Street, Reading, Pa.	do.	216.00	216.00	do.	Cahn.
88 Main Street, Rice Lake, Wis.	2 rooms.	720.00	720.00	do.	Johnson.
Campbell Avenue and Henry Street, Roanoke, Va.	4 rooms.	216.00	216.00	do.	Ferguson.
5-7 Broadway, Rochester, Minn.	1 room.	1,080.00	1,080.00	do.	Reld.
Main and South Streets, Salt Lake City, Utah.	3 rooms.	240.00	240.00	do.	Walker estate.
577 Third Street, San Bernardino, Cal.	1 room.	300.00	300.00	do.	Powderly.
Main and Second Streets, Salt Lake City, Utah.	do.	420.00	420.00	do.	Walker estate.
3044 North Commerce Street, San Antonio, Tex.	do.	490.00	490.00	do.	Dittman.
600 Market Street, San Francisco, Cal.	2 rooms.	420.00	420.00	do.	Realty Improvement Co.
5214 Carson Avenue, Fort Smith, Ark.	do.	1,000.00	1,000.00	do.	Dumbleser.
186 East Seventh Street, St. Paul, Minn.	7 rooms.	900.00	900.00	do.	White.
1837 Market Street, St. Louis, Mo.	1 room.	1,000.00	1,000.00	do.	Friedman.
890 East Broadway, East St. Louis, Mo.	do.	600.00	600.00	do.	Schmarzler.
4 North Eighth Street, St. Louis, Mo.	do.	180.00	180.00	do.	Ladogio.
317 North Third Street, St. Louis, Mo.	do.	180.00	180.00	do.	Rhodes Transportation Co.
1034 Thore Street, Hannibal, Mo.	do.	180.00	180.00	do.	Wade.
47 North First Street, San Jose, Cal.	do.	240.00	240.00	do.	Barby.

1650 Market Street, San Francisco, Cal.	11 rooms.	3,120.00	3,120.00	Realty Improvement Co.
174 East Main Street, Stockton, Cal.	2 rooms.	360.00	360.00	Stitt.
129 Fourth Street, Santa Rosa, Cal.	1 room.	120.00	120.00	Gerland rooming house.
128-130 K Street, Sacramento, Cal.	2 rooms.	360.00	360.00	Stoll.
1600 Market Street, San Francisco, Cal.	1 room.	180.00	180.00	Realty Improvement Co.
298 South Fifth Street, St. Joseph, Mo.	2 rooms.	240.00	240.00	Covby.
102 South Ohio Street, St. Louis, Mo.	1 room.	300.00	300.00	McDonald.
Room 300, South McCarren Bldg., San Antonio, Tex.	1 room, 258 square feet.	240.00	240.00	Stoves.
130 State Street, Salem, Oreg.	1 room, 21.	216.00	216.00	Klingar.
Third and Birch Streets, South Bethlehem, Pa.	2 rooms.	300.00	300.00	R. of South Bethlehem.
120 North Washington Avenue, Stratton, Pa.	7 rooms.	1,020.00	1,020.00	Reinhart.
1224 North Main Street, Salisbury, N. J.	1 room.	150.00	150.00	Aschower.
Stadium Bank Bldg., St. Louis, Mo.	2 rooms.	336.00	336.00	Rink.
100 Tower Ave., Superior, Wis.	1 room.	216.00	216.00	Archib. Hotel.
910 First and Square Streets, Springfield, Ill.	2 rooms.	240.00	240.00	First National Bank.
103 South Main Street, Somerset, Ky.	1 room.	190.80	190.80	Gregg.
407 College Street, Springfield, Mo.	1 room.	780.00	780.00	McCluer.
Philadelphia Avenue and Tenth Avenue, Santa Fe, N. M.	1 room.	252.00	252.00	Peck.
Dak.				
126 Riverside Avenue, Spaulding, Wash.	4 rooms.	1,350.00	1,350.00	Riesler.
143 West Third Street, Sterling, Ill.	1 room.	180.00	180.00	Lawrence.
143 East High Street, Springfield, Ohio	do.	180.00	180.00	Hamlin.
143 Third Street, St. Paul, Minn.	do.	180.00	180.00	Hansen.
1 West Gas Street, St. Paul, Minn.	2 rooms.	180.00	180.00	Fraser.
120 Fourth Street, St. Paul, Minn.	1 room.	240.00	240.00	Watra.
120 East State Street, St. Paul, Minn.	do.	144.00	144.00	Porter.
219 State Street, St. Paul, Minn.	do.	192.00	192.00	Ogley.
105 Texas Street, St. Paul, Minn.	2 rooms.	420.00	420.00	Simon.
Main and Division Streets, St. Paul, Minn.	1 room.	228.00	228.00	Salisbury Bldg.
27 Fourth Street, St. Paul, Minn.	2 rooms.	36.00	36.00	Granelly.
Haven Street, St. Paul, Minn.	do.	540.00	540.00	Heavenrich.
120 South Main Street, St. Paul, Minn.	4 rooms.	372.00	372.00	Berkeley.
17-39 North Main Street, St. Paul, Minn.	2 rooms.	216.00	216.00	Wilkinson.
Second and Tenth Streets, St. Paul, Minn.	do.	144.00	144.00	Federman.
113 East Tenth Street, St. Paul, Minn.	do.	240.00	240.00	Gribbin.
101 Parker Avenue, St. Paul, Minn.	1 room.	180.00	180.00	Follett.
118, Morgan Street, Springfield, Ill.	2 rooms.	330.00	330.00	Calvert.
143 East Tenth Street, Springfield, Ill.	2 floors.	1,200.00	1,200.00	J. J. Galbraith.
143 East Tenth Street, Springfield, Ill.	3 double rooms, 1 single room, bath and toilet.	600.00	600.00	Mart.
Del.				
1000 Market Street, San Francisco, Cal.	5 rooms.	1,020.00	1,020.00	Yester Estate.
1000 Market Street, San Francisco, Cal.	2 rooms.	360.00	360.00	Segel.
1000 Market Street, San Francisco, Cal.	2 rooms.	360.00	360.00	Postable.
1000 Market Street, San Francisco, Cal.	2 rooms.	600.00	600.00	Syracuse Trust Co.
1000 Market Street, San Francisco, Cal.	4 rooms.	900.00	900.00	Patterson.
1000 Market Street, San Francisco, Cal.	2 rooms.	96.00	96.00	Mitchell.
1000 Market Street, San Francisco, Cal.	2 rooms.	180.00	180.00	Corwin & Steink.
1000 Market Street, San Francisco, Cal.	1 room.	300.00	300.00	Stetson.
1000 Market Street, San Francisco, Cal.	1 room.	252.00	252.00	Wilcox.
1000 Market Street, San Francisco, Cal.	6 rooms.	600.00	600.00	

(a) *Rentals of office space authorized, showing office for which rented, place, square feet, rate per annum, name and street, location of building, and amount of funds authorized for the rental—Continued.*

OFFICE SPACE FOR RECRUITING—Continued.

Street and location of building.	Square feet in office.	Rate per annum.	Amount of funds authorized.	Office for which rented.	Lessor's name.
Hartman Building, Center Square, York, Pa.	2 rooms	\$384.00	\$384.00	Recruiting.	Logan
511 East Main Street, Zanesville, Ohio.	1 room	216.00	216.00	do.	Christman.
Getty Square Station, Yonkers, N. Y.	do.	300.00	800.00	do.	New York Central R. R.
712 Amicable Building, Waco, Tex.	do.	180.00	180.00	do.	Sturgis.
208 South Fifth Street, Wilmarr, Minn.	2 rooms	216.00	216.00	do.	Starnford.
Gates Block, White River Junction, Vt.	1 room	204.00	170.00	do.	Davis.
44 Front Street, Worcester, Mass.	2 rooms	552.00	552.00	do.	Taylor.
27 Smith Building, Watertown, N. Y.	3 rooms	504.00	504.00	do.	Christopher.
323 Main Street, Woonsocket, R. I.	1 room	240.00	240.00	do.	Walsh.
3 Lott Street, Waycross, Ga.	do.	120.00	120.00	do.	Lott.
707 1/2 Ohio Avenue, Wichita Falls, Tex.	do.	132.00	132.00	do.	Hines.
31 Public Square, Wilkes-Barre, Pa.	2 rooms	240.00	240.00	do.	Lanning.
316 Liberty Street, Winston-Salem, N. C.	1 room	360.00	360.00	do.	Ferguson.
South Main Street, Wichita, Kans.	7 rooms	1,380.00	1,380.00	do.	Beacon Building Co.
1432 Market Street, Wheeling, W. Va.	2 rooms	300.00	300.00	do.	Zeppides.
Die Buleke, W. Ala. Walla, Wash.	do.	198.00	198.00	do.	Bannmeister.
Third and Main Streets, Washington, Ind.	do.	144.00	144.00	do.	Hayes.
908 Market Street, Washington, Ill.	do.	600.00	600.00	do.	Greenbaum.
103 South Maple Street, Watertown, S. Dak.	1 room	240.00	240.00	do.	Alexander.
81 North Main Street, Washington, Pa.	do.	240.00	240.00	do.	Oliver.
227 East Fourth Street, Waterloo, Iowa.	2 rooms	240.00	240.00	do.	Wangler.
110 Quitman Avenue, Winona, Minn.	1 room	180.00	180.00	do.	Slason.
4034 Austin Street, Waco, Tex.	do.	180.00	180.00	do.	Wright.
207 North Ashley Street, Valdosta, Ga.	do.	120.00	90.00	do.	Carty Co.
218 North Main Street, Vernon, Tex.	do.	180.00	120.00	do.	Hawkins.
Exchange Bank Building, Valdosta, Ga.	do.	120.00	120.00	do.	Carty Co.
Main and Constitution Streets, Victoria, Tex.	do.	210.00	210.00	do.	Welder.
16 East Main Street, Vinton, Va.	do.	240.00	240.00	do.	Wilkinson.
326 Chestnut Street, Virginia, Minn.	do.	240.00	240.00	do.	Mesbury.
128 Main Street, Vincennes, Ind.	do.	162.00	162.00	do.	Hall.
1204 State Line Avenue, Texarkana, Ark.	2 rooms	360.00	360.00	do.	Schiffman.
400 Main Avenue, Twin Falls, Idaho.	1 room	240.00	240.00	do.	Twin Falls Bank & Trust Co.
423 Kansas Avenue, Topeka, Kans.	2 rooms	300.00	300.00	do.	Hosland.
916 Main Street, Trenton, Mo.	1 room	240.00	240.00	do.	Stein.
113 South Spring Street, Tupelo, Miss.	do.	144.00	144.00	do.	Armstrong.
148 East Front Street, Traverse City, Mich.	do.	180.00	180.00	do.	Bertak.
224 East Second Street, Tulsa, Okla.	do.	192.00	192.00	do.	Rodell.
30 North Congress Street, Tucson, Ariz.	do.	300.00	260.00	do.	Loza.
916 Adams Street, Toledo, Ohio	4 rooms, alcove room and bath.	960.00	960.00	do.	Wynn.

103 North Second Street, Dallas, Oreg.	1 room.	216. 00	216. 00	do.	Elliott.
709 Wabash Avenue, Terre Haute, Ind.	7 rooms.	960. 00	960. 00	do.	Anton.
Broed and Berwick Streets, Tamaqua, Pa.	1 room.	240. 00	240. 00	do.	National Bank.
620 First Avenue, Two Harbors, Minn.	2 rooms.	240. 00	240. 00	do.	Kupp.
214 Front Street, Traverse City, Mich.	1 room.	180. 00	180. 00	do.	Ruff.
74 Atlantic Street, Tullahoma, Tenn.	do.	180. 00	180. 00	do.	Cowan.
W. J. Upchurch Building, Thomasville, Ga.	2 rooms.	204. 00	204. 00	do.	Upchurch.
Croft Hotel, 1519 Pacific Avenue, Tacoma, Wash.	do.	384. 00	384. 00	do.	Croft.
32 Main Street, Taunton, Mass.	1 room.	240. 00	240. 00	do.	Gaffney.
First and River Streets, Troy, N. Y.	2 rooms.	264. 00	264. 00	do.	Hall.
103 East State Street, Trenton, N. J.	do.	300. 00	300. 00	do.	Fischer.
223 North Commercial Street, Trinidad, Colo.	1 room.	300. 00	300. 00	do.	Cresto.
411 South Boston Avenue, Tulsa, Okla.	Entire building.	360. 00	200. 00	do.	Board of Trade.
Tyrone, Pa.	2 rooms.	300. 00	200. 00	do.	Pascoe.
1 Franklin Square	1 room.	360. 00	360. 00	do.	

STORAGE SPACE.

(b) Rentals of storage space authorized, showing building, for which rented, place, square feet, rate per annum, name and street, location of building, and amount of funds authorized for the rental.

Name, street, and location of building.	Square feet in office.	Rate per annum.	Amount of funds authorized.	Office for which rented.
Twelfth Street, Maryland Avenue, and Water Street SW., Washington, D. C.		\$22,350.00	\$20,487.50	Warehouse station.
21 M Street NE., Washington, D. C.	133,652.....	7,967.10	7,967.10	Field medical supply depot.
236 Nineteenth Street NW., Washington, D. C.		3,600.00	3,600.00	Stable and storehouse.
238 Nineteenth Street NW., Washington, D. C.		1,500.00	1,500.00	Garage.
Adjacent Antietam Battlefield.		30.00	30.00	Storage space.
Terminal Cold Storage Warehouse No. 3, Washington, D. C.		1,200.00	1,200.00	Storehouse.
1514 Eckington Place NE., Washington, D. C.		4,928.00	4,928.00	Warehouse.
Building on fairground, Allentown, Pa.		900.00	450.00	Subsistence storehouse.
Armory, Allston, Mass.		1,800.00	1,350.00	Garage and storeroom.
Sixth and Noole Streets, Anniston, Ala.	19,900.....	2,400.00	700.00	Storehouse.
Atlanta, Ga.	57,232.....	14,308.00	11,923.33	Warehouse.
Do.	23,040.....	5,760.00	3,840.00	General supply depot.
Do.	103,680.....	25,920.00	25,920.00	Storage space.
Do.	35,770.....	8,942.50	8,942.50	Warehouse.
Do.	50,078.....	12,519.50	9,389.63	Do.
Do.	227,929.....	56,982.25	56,982.25	Do.
Do.	43,660.....	360.00	360.00	Storage space.
Coco Cola Building, Pratt Street and Market Place, Baltimore, Md.	41,920.....	12,000.00	9,450.00	Offices and storerooms.
Ninth and tenth floors, Jaynes Building, 1020 Washington Street, Boston, Mass.	40,000.....	17,000.00	17,000.00	Depot office and storerooms.
Brownsville, Tex.		60.00	60.00	Storage for material and supplies.
Jaynes Building, Boston, Mass.	37,000.....	14,500.00	14,500.00	Storage space.
Jaynes Building, 1020 Washington Street, Boston, Mass.	10,000.....	4,000.00	4,000.00	Storeroom.
Jaynes Building, 1000 Washington Street, Boston, Mass.	10,000.....	3,750.00	1,875.00	Storage space.
Store No. 10, Bush Terminal, Brooklyn, N. Y.	2,500.....	1,500.00	250.00	Storage space for equipment
2 St. Botolph Street, Boston, Mass.		180.00	180.00	First Reserve Aero Squadron, Mineola, Long Island.
104-106 Brookline Avenue, Boston, Mass.	3,250.....	1,500.00	250.00	Garage space.
Fronton Street, Brownsville, Tex.	4,186.....	1,200.00	1,200.00	Storeroom.
Do.	3,500.....	540.00	540.00	Warehouse.
Tenth and Adams Streets, Brownsville, Tex.	Entire building.	1,200.00	1,200.00	Do.
Brownsville, Tex.	Two parcels of land.	144.00	144.00	Do.
Block 205 and 206, Brownsville, Tex.		660.00	660.00	Location and storage, transfer and storage of material, etc.
Rice Mill Building & Yards, Brownsville, Tex.		4,320.00	4,320.00	Site for motor truck storage shed.
17 and 23 Clarendon Street, Boston, Mass.		1,098.00	467.50	Office and storehouse and site for warehouse.
27 Burlington Avenue, Boston, Mass.	62,000.....	15,500.04	15,500.04	Garage.
Automobile plant, Cambridge, Mass.	450,600.....	90,777.96	52,953.81	Depot quartermaster warehouse.
1220 Pulaski Street, Columbia, S. C.		361.80	723.60	General depot.
No. 130 East Bay Street, Charleston, S. C.	Entire building.	1,020.00	1,020.00	Storage room.
19 Primrose Street, Charleston, S. C.	Entire building.	2,700.00	2,700.00	Storehouse.
Lots 1-12, inclusive, Calexico, Cal.		600.00	600.00	Storehouse, stable or otherwise.
22 Hayne Street, Charleston, S. C.		1,800.00	1,800.00	Storehouse.
Old post-office building, Charleston, S. C.	5,810.....	300.00	300.00	Garage and storehouse.
Iron Street, Chicago, Ill.	18,500.....	420.00	420.00	Storehouse.
Thirty-ninth and Robey Streets, Chicago, Ill.	18,150.....	4,356.00	4,356.00	Garage and storehouse.

1 Per car.

STORAGE SPACE—Continued.

(b) Rentals of storage space authorized, showing building, for which rented, place, square feet, rate per annum, name and street, location of building, and amount of funds authorized for the rental—Continued.

Name, street, and location of building.	Square feet in office.	Rate per annum.	Amount of funds authorized.	Office for which rented.
1117-1135 Clark Street, Chicago, Ill.		(1)	(1)	Garage space.
Chicago, Ill.	5,096,520	\$10,000.00	\$9,166.63	General depot.
Douglas, Ariz.		720.00	720.00	Ordnance-storehouse site.
Do.		50.00	50.00	Site for storehouse.
Do.		1.00	1.00	Storehouse site.
Do.	167	390.00	390.00	Cold-storage warehouse.
El Paso, Tex.	2,420	4,200.00	4,200.00	Cold-storage rooms.
Texas and Laurel Streets, El Paso, Tex.		12,000.00	12,000.00	Warehouse.
El Paso, Tex.		4,200.00	4,200.00	Depot.
Do.		1.00	1.00	Site of warehouse.
115 Antony Street, El Paso, Tex.		1,200.00	1,200.00	Warehouse.
Block 28M, El Paso, Tex.		2,100.00	2,100.00	Do.
518-520 San Francisco Street, El Paso, Tex.		5,640.00	5,640.00	Storage and warehouse.
Niagara, N. Y.	4,800	3,600.00	1,200.00	Storehouse.
Kellum Place, Garden City, Long Island, N. Y.		240.00	40.00	Warehouse.
Corner Eleventh Street and Hill-ton Avenue, Garden City, Long Island, N. Y.		600.00	100.00	Do.
Corner of Washington and Railroad Streets, Gettysburg, Pa.		1,500.00	1,500.00	Storehouse.
Queen and Mannakee Streets, Honolulu, Hawaii.		750.00	750.00	Do.
Alakea Street, Honolulu, Hawaii.	1,578	3,240.00	3,240.00	Cold storage space.
Halekanila and Kakuanaca Streets, Honolulu, Hawaii.	8,830	1,920.00	1,920.00	Storehouse.
9-11 Kinoole Street, Hilo, Hawaii		42.00	42.00	Garage.
Railroad Avenue and Pearl Street, Jackson, Miss.	2,500	600.00	600.00	Storehouse.
906 Third Street, Los Angeles, Cal.	22,000	3,600.00	2,700.00	Warehouse.
122 East Sixth Street, Los Angeles, Cal.		144.00	120.00	Shelter.
Louisville, Ky.		1.00	.75	Storage.
Do.		24,000.00	24,000.00	Ambulance depot.
920 East Third Street, Los Angeles, Cal.	44,000	6,300.00	6,300.00	Warehouse.
Victoria Street and Eagle Pass, Laredo, Tex.		540.00	540.00	Do.
2110 Victoria Street, Laredo, Tex.		600.00	600.00	Do.
2109 Washington Street, Laredo, Tex.		420.00	420.00	Do.
538-542 South Los Angeles Street, Los Angeles, Cal.		168.00	140.00	Shelter.
Manila, P. I.		56,434.56	75,000.00	Cold storage.
Illinois Avenue and Fourth Street, Mercedes, Tex.		336.00	336.00	Warehouse.
877 Calle Dagupan, District of Fondo, Manila, P. I.		180.00	180.00	Storeroom and office.
Marathon, Tex.	Entire building(2 rooms).	36.00	36.00	Storage for trucks.
Avenue C, Marathon, Tex.	2,400	360.00	360.00	Warehouse.
Marfa, Tex.	96	60.00	60.00	Storage tank.
Rue De Loup, Nevers, France.	174,240	144.00	120.00	Storage for forage or otherwise.
537-545 Greenwich Street, New York, N. Y.		17,050.00	17,050.00	Medical supply depot.
Julia Street, South Robertson Street, Southern Railway & Navigation Co. Tracks and Freret Streets, New Orleans, La.		2,496.00	1,872.00	Quartermaster storehouse.
216 West Thirtieth Street, New York, N. Y.		3,800.00	3,483.34	Garage.
New Orleans, La.	200	180.00	180.00	Do.
Warwick Avenue, Newport News Va.		26,000.00	19,500.00	Warehouse.
128-134 Twenty-third Street, Newport News, Va.	10,000	1,200.00	1,200.00	Storage warehouse.
Saratoga Street, New Orleans, La.	800	420.00	420.00	Combination storehouse and stable.
92 Morton Street, New York, N. Y.		46,000.00	46,000.00	Storage warehouse, etc.
2608 Huntington Avenue, Newport News, Va.		60.00	60.00	Garage space.

¹ \$270 per auto.

STORAGE SPACE—Continued.

(b) *Rentals of storage space authorized, showing building, for which rented, place, square feet, rate per annum, name and street, location of building, and amount of funds authorized for the rental—Continued.*

Name, street, and location of building.	Square feet in office.	Rate per annum.	Amount of funds authorized.	Office for which rented.
New Orleans, La.....	47,750.....	\$6,000.00	\$5,000.00	Subsistence supplies ware house.
1338 Arabella Street, New Orleans, La.	.....	96.00	80.00	Automobile accommodations.
South Front Street, New Orleans, La.	Entire building.	3,000.00	3,000.00	Quartermaster storehouse.
358 Grand Avenue, Nogales, Ariz.	.....	1,200.00	1,200.00	Cold storage.
Sixth Avenue and Thirteenth Street, New York, N. Y.	25,000.....	4,200.00	3,150.00	Warehouse.
Eighteenth Street, Newport News, Va.	.....	300.00	225.00	Signal Corps storehouse.
Oceanport Avenue, Oceanport, N. J.	1,800.....	300.00	300.00	Storehouse.
Do.....	1,800.....	240.00	240.00	Do.
1208 Howard Street, Omaha, Nebr.	.....	1,992.00	1,992.00	Warehouse.
Second and Kenny Streets.....	.....	120.00	110.00	Garage.
328 Glisan Street, Portland, Oreg.	5,000.....	5,400.00	5,400.00	Storehouse.
Front and Federal Streets, Philadelphia, Pa.	27,960.....	11,184.00	11,184.00	Warehouse.
Second and Ankeny Streets, Portland, Oreg.	.....	120.00	120.00	Garage.
Pier No. 40, South Wharves, Philadelphia, Pa.	98,807.....	33,220.20	30,451.85	Warehouse.
128-130 Lamar Street, San Antonio, Tex.	4,000.....	900.00	900.00	Do.
Walnut Street, San Antonio, Tex.	5,840.....	1,080.00	1,080.00	Do.
South Walnut Street, San Antonio, Tex.	5,760.....	1,200.00	1,200.00	Do.
1130 Pacific Avenue, San Pedro, Cal.	.....	60.00	45.00	Garage.
Wheel Chair Building, Exposition Ground.	140.....	600.00	500.00	Storeroom.
Balboa Park, San Diego, Cal.....	.....	.....	.....	.....
Santa Fe Building, 601 Market Street, San Francisco, Cal.	580.....	300.00	225.00	Storage space.
1130 Pacific Avenue, San Pedro, Cal.	.....	60.00	10.00	Garage.
418 Burnett Street, San Antonio, Tex.	4,089.....	900.00	900.00	Warehouse.
Hays and North Cherry Streets, San Antonio, Tex.	20,000.....	4,500.00	4,500.00	Do.
Lamar Street, San Antonio, Tex.	3,600.....	600.00	600.00	Do.
208-210 Loyosa Street, San Antonio, Tex.	5,800.....	2,100.00	2,100.00	Do.
Lamar Street, San Antonio, Tex.	5,400.....	720.00	720.00	Do.
New City Block 527, San Antonio, Tex.	4,000.....	600.00	600.00	Do.
Burnett Street, San Antonio, Tex.	8,000.....	2,160.00	2,160.00	Do.
Cherry Street, San Antonio, Tex.	9,600.....	2,400.00	2,400.00	Do.
Do.....	3,040.....	600.00	600.00	Do.
South Medina and San Luis Streets, San Antonio, Tex.	6,000.....	1,500.00	1,500.00	Do.
Lots 16, 17, and 22, San Antonio, Tex.	3,200.....	900.00	900.00	Do.
703-707 East Commerce Street, San Antonio, Tex.	17,141.....	4,800.00	4,800.00	Subsistence warehouse.
1209-1215 West Commerce Street, San Antonio, Tex.	.....	3,000.00	3,000.00	Warehouse.
Burnett and Walnut Streets, San Antonio, Tex.	2,000.....	480.00	480.00	Storage.
1616 West Commerce Street, San Antonio, Tex.	7,220.....	2,100.00	2,100.00	Warehouse.
South Medina Street, San Antonio, Tex.	6,500.....	900.00	900.00	Do.
San Fernando and South Medina Streets, San Antonio, Tex.	7,015.....	1,200.00	1,200.00	Do.
309-311 South Salado Street, San Antonio, Tex.	8,100.....	1,800.00	1,800.00	Do.
213 South Salado Street, San Antonio, Tex.	19,636.....	5,280.00	5,280.00	Do.
Walnut Street, San Antonio, Tex.	11,155.....	2,520.00	2,520.00	Do.
New City Block 527, San Antonio, Tex.	4,800.....	600.00	600.00	Do.
Do.....	22,800.....	2,340.00	2,340.00	Do.
Do.....	6,120.....	900.00	900.00	Do.
South Flores Street, San Antonio, Tex.	7,500.....	2,100.00	2,100.00	Do.

STORAGE SPACE—Continued.

(b) *Rentals of storage space authorized, showing building, for which rented, place, square feet, rate per annum, name and street, location of building, and amount of funds authorized for the rental—Continued.*

Name, street, and location of building.	Square feet in office.	Rate per annum.	Amount of funds authorized.	Office for which rented.
Burnett and Walnut Streets, San Antonio, Tex.	4,500.....	\$1,200.00	\$1,200.00	Warehouse.
New City Block 545, San Antonio, Tex.	10,200.....	2,100.00	2,100.00	Do.
1903 South Flores Street, San Antonio, Tex.	4,720.....	1,380.00	1,380.00	Do.
307 North Medina Street, San Antonio, Tex.	7,150.....	6,120.00	6,120.00	Do.
1900 South Flores, San Antonio, Tex.	12,000.....	3,600.00	3,600.00	Do.
500-512 North Fourth Street.....	.....	27,600.00	23,000.00	Storehouse.
Twelfth and Chestnut Streets, St. Louis, Mo.	.....	360.00	360.00	Garage.
Main and George Streets, St. Louis, Mo.	.....	4,000.00	4,000.00	Warehouse.
Burnett and Walnut Streets, San Antonio, Tex.	12,000.....	3,000.00	3,000.00	Do.
410-416 Stockton Street, San Francisco, Cal.	.....	180.00	180.00	Garage.
Lenora Street Warehouse, Seattle, Wash.	21,600.....	3,600.00	3,600.00	Storehouse.
Erickson Building, Seattle, Wash.	1 room.....	720.00	720.00	Storeroom.
Arlington Hotel Building, Seattle, Wash.	14,000 square feet.	2,100.00	2,100.00	Do.
3316-3322 South Broadway, St. Louis, Mo.	12,700.....	3,249.96	3,249.96	Quartermaster storehouse.
204 and 208 South Eighth and 121-127 South Seventh Streets, St. Louis, Mo.	.....	7,500.00	7,500.00	Storehouse and other purposes.
Corner Main and Victor Streets, St. Louis, Mo.	12,480.....	3,000.00	3,000.00	Quartermaster storehouse.
512-530 O'Fallon Street, St. Louis, Mo.	.....	9,000.00	9,000.00	Storehouses and other purposes.
New City Block 545, San Antonio, Tex.	17,490.....	4,200.00	4,200.00	Warehouse
Block 536, San Antonio, Tex.....	8,800.....	2,400.00	2,400.00	Do.
New City Block 289, San Antonio, Tex.	20,000.....	3,600.00	3,600.00	Do.
San Antonio, Tex.....	13,837.....	3,300.00	3,300.00	Do.
San Benito, Tex.....	.....	36.00	36.00	Garage.
Matamoras Street, San Antonio, Tex.	1,600.....	9,600.00	9,600.00	Warehouse.
San Fernando and South Medina Streets, San Antonio, Tex.	5,980.....	900.00	825.00	Do.
North Hackberry Duval, North Hackberry and North Mesquite Streets, San Antonio, Tex.	.....	24,536.40	24,536.40	Do.
Pier 11, North Wharf Warehouse, Seattle, Wash.	.....	16,650.00	16,650.00	Wharf offices and storeroom.
Cherry and Burnett Streets, San Antonio, Tex.	7,144.....	2,280.00	2,280.00	Warehouse.
Burnett and Cherry Streets, San Antonio, Tex.	.....	2,100.00	2,100.00	Do.
2013-2115 Third Avenue, Seattle, Wash.	.....	336.00	336.00	Storage cleaning space for auto cars.
701-707 North First Street, St. Louis, Mo.	70,000.....	12,000.00	10,000.00	Warehouse.
188-190 Ezell Street, Spartanburg, S. C.	Entire building.	720.00	360.00	Storehouse.
Tientsin, China.....	.....	310.25	310.25	Storehouses and offices.

Storage space rented at various places, together with cost of same per annum:

PHILADELPHIA.

Storage space for compressed hay; all the space required to be paid for at the rate of 70 cents per ton per month or \$8.40 per ton per annum.

Storage space for not to exceed 61 motor ambulance bodies, at \$2 per body per month or \$24 per body per annum.

Square feet.	Price per square foot per annum.	Total price per annum.
27,960	\$0.40	\$11,184
70,000	.51½	36,000
60,000	.35	21,000
157,960	.....	68,184

The average price per square foot per annum is approximately 43½ cents.

BOSTON.

Garage (number of square feet not available), \$140, from September 1, 1917, to December 31, 1917.

Ford plant, 229,800 square feet storage space in building; area of lot in connection with building, 220,000 square feet.

Square feet.	Price per square foot per annum.	Total price per annum.
1 449,800	\$0.20½	\$90,777.96
20,000	.30	6,000.00
15,000	.40	6,000.00
25,000	.25	6,250.00
16,000	.37½	6,000.00
10,000	.40	4,000.00
20,000	.25	5,000.00
22,000	.25	5,500.00
20,000	.40	8,000.00
27,000	.18½	4,995.00
5,250	.28½	1,500.00
10,000	.60	6,000.00
640,050	.....	150,022.96

1 Ford plant.

The average price per square foot per annum is approximately 23½ cents.

NEW YORK.

Square feet.	Price per square foot per annum.	Total price per annum.
15,000	\$0.001½	\$24.00
120,000	.38½	46,000.00
25,000	.16½	4,200.00
160,000	.....	50,224.00

The average price per square foot per annum is approximately 33½ cents.

Rear half of Belvedere Building, 232 Fourth Avenue (no dimensions given). \$2,400 per annum.

Garage space, \$3,800 per annum. Garage space, \$300 per annum.

ST. LOUIS.

Storehouse at 512-530 O'Fallon Street, \$750 per month, or \$9,000 per annum.

Square feet.	Price per square foot per annum.	Total price per annum.
36,000	\$0.084	\$3,000.00
21,000	.154	3,284.00
60,000	.15	9,000.00
180,000	.154	27,600.00
297,000	.....	42,834.00

The average price per square foot per annum is approximately 14½ cents.

JEFFERSONVILLE.

Square feet.	Price per square foot per annum.	Total price per annum.
16,900	\$0.604	\$4,200.00

¹ Louisville, Ky.

CHICAGO.

Hawthorne tract, 117 acres at \$1,000 per month, or \$12,000 per annum.

Square feet.	Price per square foot per annum.	Total price per annum.
330,000	\$0.34	\$112,200.00
125,830	.30	37,749.00
18,500	.24	4,440.00
474,330	.....	154,389.00

The average price per square foot per annum is approximately 32½ cents.

ATLANTA.

Square feet.	Price per square foot per annum.	Total price per annum.
57,232	\$0.25	\$14,308.00
50,078	.25	12,519.50
83,000	.25	20,750.00
70,407	.25	17,601.75
6,500	.154	1,023.75
35,770	.25	8,942.50
23,000	.25	5,750.00
7,500	.20	1,500.00
103,680	.25	25,920.00
437,167	.....	108,315.50

The average price per square foot per annum is approximately 24½ cents.

BALTIMORE.

Square feet.	Price per square foot per annum.	Total price per annum.
50,000	\$0.79½	\$39,680.00
21,000	.60	12,600.00
185,000	.44	81,400.00
25,000	.76½	19,200.00
281,000	.....	152,800.00

The average price per square foot per annum is approximately 54½ cents

SEATTLE.

One room, 1306 Post Street, Signal Corps storeroom, at \$50 per month or \$600 per annum.

Square feet.	Price per square foot per annum.	Total price per annum.
21,000	\$0.17½	\$3,600.00
135,000	.10½	3,600.00

1 In Tacoma.

The total number of square feet of storage space rented at each of the above places, together with total cost of same, is as follows:

Place.	Square feet.	Cost per annum.
Philadelphia.....	157,960	\$68,184.00
Boston.....	640,050	150,022.96
New York.....	160,000	50,234.00
St. Louis.....	297,000	42,834.00
Jeffersonville (Louisville, Ky.).....	6,900	4,200.00
Chicago.....	474,330	154,389.00
Atlanta.....	437,167	108,315.50
Baltimore.....	281,000	152,800.00
Seattle.....	21,000	3,600.00
Seattle (Tacoma).....	35,000	3,600.00
Total.....	2,510,407	738,169.46

The average price per square foot per annum of the total amount of storage space rented is approximately 29½ cents.

EL PASO, TEX.

Total warehouse space held under lease, 199,120 square feet; rent per square foot per annum, 18.863 cents.

Leased since April, 1917, 8,088 square feet; rent per square foot per annum, 18.546 cents.

Number, area, and cost of temporary storehouses erected, 9 buildings, 43 feet 6 inches by 162 feet outside, 6,947 square feet each, cost \$1,999.50 each. These buildings were originally constructed in connection with the storage of automobiles, automobile trucks, etc. At the present time they are being utilized for the storage of property, hard bread, and property of officers and organizations now on duty overseas.

Temporary storehouses erected at depots.

Depot.	Number.	Capacity.	Cost.
Jeffersonville.....	1		\$0,500
Do.....	1		2,000
Do.....	1	45 by 300 feet.....	19,000
Do.....	3	45 by 100 feet each.....	12,300
Do.....	1	45 by 224 feet.....	17,500
Do.....	2	45 by 300 feet each.....	32,000
Do.....	1		380,000
Do.....	1	45 by 150 feet.....	16,260
Atlanta.....	1		2,500
Washington.....	1		465
Do.....	1		500
Do.....	3	36 by 300 feet each.....	24,000
Atlanta.....	1	2,200 square feet.....	2,000
San Francisco.....	1		1,000
Do.....	2		9,000
Do.....	2		33,186
St. Louis.....	2	60 by 3,608 feet.....	30,000
Do.....			115,000
Omaha.....	1		6,300
Chicago.....	1	100 by 250 feet.....	15,000
Chicago (garage).....	1	10 cars.....	1,200
Fort Sam Houston.....	1	82 by 100 feet.....	5,300
Governors Island.....	30		909,500
Do.....	4	60 by 308 feet.....	184,000

Piers rented.

Place.	Pier No.	Dimensions.
Philadelphia.....	40	90 by 550 feet.
Do.....	38	250 by 900 feet.
Do.....	78	Do.
New York City.....	45	82 by 835 feet.
Hoboken.....	1	100 by 650 feet.
Baltimore.....	3	150 by 800 feet.
Do.....	6	140 by 940 feet.
Seattle.....	11-B	405 feet frontage; contains 140,000 square feet.

Philadelphia.—Pier No. 40 has two decks, the first containing approximately 52,569 square feet, at 25 cents per square foot per annum, or \$13,142.25. The second deck contains approximately 46,238 square feet, at 15 cents per square foot per annum, or \$6,935.70. The total cost per annum of the pier is \$20,077.95.

Pier No. 38 has two decks, the first containing approximately 99,202 square feet. The bulkhead shed to the north of this pier contains 3,018 square feet and the one to the south 2,935 square feet, totaling 105,155 square feet, at the rate of 25 cents per square foot per annum, or \$26,288.75. The upper deck contains 89,543 square feet, the cost of which is 15 cents per square foot per annum, amounting to \$13,431.45. The total cost per annum of the entire pier is \$39,720.20.

Pier No. 78 has two decks, each containing approximately 225,000 square feet. The rate for the lower deck is 25 cents per square foot per annum, which amounts to \$56,250. The rate for the upper deck is 15 cents per square foot per annum, or \$33,750. The total cost per annum of this pier is \$90,000.

New York.—Pier No. 45 contains 68,470 square feet, at \$60,000 per annum, or approximately 87½ cents per square foot per annum.

Hoboken.—Pier No. 1 contains approximately 65,000 square feet, at \$102,000 per annum, or approximately \$1.57 per square foot per annum.

Baltimore.—Pier No. 3 contains approximately 120,000 square feet, at \$72,000 per annum, or approximately 60 cents per square foot per annum.

Pier No. 6 contains 235,875 square feet, at \$150,000 per annum, or approximately 63½ cents per square foot per annum.

Seattle.—Pier 11B contains 140,000 square feet, at \$16,650 per annum, or approximately 11½ cents per square foot per annum.

The CHAIRMAN. I believe the question was asked the other day if you could put into the record a statement showing the shortage of clothing in each particular camp.

Gen SHARPE. We are having that prepared.

The CHAIRMAN. You are preparing that, and that will show the exact shortage of clothing at each cantonment?

Gen SHARPE. Wherever there is a shortage.

The CHAIRMAN. And what the status is now?

Gen. SHARPE. Of the date you called for it.

The CHAIRMAN. Up to date?

Gen. SHARPE. Yes, sir.

Mr. KAHN. Along that line, if you will permit me, a statement was made last night by a Member of the House that when our forces went to France they had to buy 200,000 uniforms in England for our troops in France. Do you know anything about that?

Gen. SHARPE. Yes, sir; that was authorized. It was referred to in the hearings. It was authorized for the reason that they wanted to have a reserve over there.

Mr. KAHN. It was not for the immediate use of the Army, but simply as a reserve?

Gen. SHARPE. As I explained, we got the authority here, and I suggested it myself, by inquiry of the British officer on duty in our office, whether or not it would be possible for them to supply any clothing to us from the British Government. The British officer took it up with his Government and they said they could sell us 100,000 uniforms already made up, and they could give us the cloth for an additional 100,000.

The CHAIRMAN. Under this item of barracks and quarters, did you pay for the construction of cantonments out of last year's appropriation?

Gen. SHARPE. Yes, sir.

The CHAIRMAN. That was included in this item, and paid out of last year's appropriation?

Gen. SHARPE. Yes, sir.

The CHAIRMAN. Will you put in the record what each of the cantonments cost?

Gen. SHARPE. Yes, sir.

The CHAIRMAN. And give us information as to the size of the structures of the different quarters there. Who regulated that?

Gen. SHARPE. That was fixed by the Surgeon General, as to the air space.

Gen. LITTELL. Mr. Chairman, if you desire it, we can furnish you a tabulated statement for the record showing the cost of every single building that has been put in each cantonment.

The CHAIRMAN. I would like to have that in the record. But the point I am inquiring about especially just now is the size of the quarters for the men, how many men you put in the quarters, and who fixed the size of the quarters.

Gen. LITTELL. Of course, the size of the buildings—in the first place, we determined the air space per man, and the size of the building would have to be determined by the number of men to be housed.

The CHAIRMAN. What was the air space for each man, and how many men were there?

Gen. LITTELL. The air space desired by the Surgeon General was 500 cubic feet per man, and in the Infantry companies as now prescribed the strength is 250 men.

When we first designed the cantonments the strength of the Infantry companies was 100 men. It was afterwards changed, and when we got the buildings about three-quarters finished they changed the strength of the company from 200 to 250 men. and that made necessary a rearrangement of all plans, and the building of an additional number to accommodate the additional strength of the companies. I understand the change in the strength of the companies was made to meet the request of Gen. Pershing as to the organizations of the divisions.

The CHAIRMAN. Then, as I understand it, according to the original construction plan, you followed the recommendations of the Surgeon General as to space?

Gen. LITTELL. As near as possible.

The CHAIRMAN. You followed that, and the reason the barracks became crowded was because of the large increase in the infantry companies.

Gen. LITTELL. We changed that, Mr. Chairman, so that they could have that amount of air space.

The following tables show the number, size, etc., of the cantonment buildings originally contemplated:

Men's barracks (without mess).

2 story.			1 story.																Med. B, 2 story.				
11. No. 60.			Drawing No. 46.																43. No. 45.				
43' x 140', chg.	30' x 60'.	30' x 80', chg.	20' x 63'.	20' x 70'.	20' x 77'.	20' x 84'.	20' x 91'.	20' x 98'.	20' x 105'.	20' x 112'.	20' x 119'.	20' x 126'.	20' x 133'.	20' x 140'.	20' x 147'.	20' x 154'.	20' x 161'.	20' x 168'.	20' x 175'.	20' x 119'.	20' x 98'.	20' x 126, chg.	
Capacity, men at 500 cubic feet per man, officers in special rooms. Camp Custer..... Camp Devens..... Camp Dix..... Camp Dodge..... Camp Funston..... Camp Gordon..... Camp Grant..... Camp Jackson..... Camp Lee..... Camp Lewis..... Camp Meade..... Camp Pike..... Camp Sherman..... Camp Taylor..... Camp Travis..... Camp Upton.....	200	60	70	{ A20 } B25	{ B28 } B28	{ A26 } B31	{ A30 } A30	{ A32 } B37	{ B39 } B39	{ A35 } B41	{ A40 } A40	{ A43 } B48	{ B50 } B50	{ A48 } B53	{ A51 } A51	{ A54 } B59	{ B62 } B62	{ A58 } B64	{ B62 } B62	A48 B53	33	23	46
	32	19	6																		7	2	2
	41	19	6																		7	3	2
	49	19	6																		8	2	2
	35	19	6																		11	2	2
	30	19	6																		11	2	2
	35	65	6																		10	2	2
	32	115	6																		10	2	2
	34	131	6																		9	3	2
	35	115	6																		10	2	2
	33	115	6																		13	2	2
	35	115	6																		8	2	2
	35	115	6																		10	2	2
	33	67	6																		9	2	2
	35	115	6																		14	2	2
41	67	6																		11	2	2	
33	99	6																		8	2	2	
568	1214	98																			156	34	32
Grand totals of above items.....																							

Total number of buildings in all units except remount stations and base hospitals—Continued.

Mess buildings.															47B.		Administration, 1 story.		Post exchange, 1 story.					
1 story.																			32A.			32C.		
Drawing No. 47.															10.		28.		29.					
	20' x 49'.	20' x 56'.	20' x 63'.	20' x 70'.	20' x 77'.	20' x 84'.	20' x 91'.	20' x 98'.	20' x 106'.	20' x 112'.	20' x 119'.	20' x 126'.	20' x 133'.	20' x 147'.	20' x 49', chg.	60' x 63', D. B.	20' x 84'.	20' x 56', chg.	20' x 21'.	20' x 88'.	20' x 84'.	26' x 90'.	32' x 90'.	1
Camp Custer.....	2														1		18	3	1					1
Camp Devens.....	2														1		19	3	1					
Camp Dix.....	2														1		20	3	1					
Camp Dodge.....	2														1		21	3	1					
Camp Funston.....	2														1		21	3	1					
Camp Gordon.....	2													12	1		20	3	1					
Camp Grant.....	2													24	1		18	3	1					
Camp Jackson.....	2													28	1		20	3	1					
Camp Lee.....	2													24	1		21	3	1					
Camp Lewis.....	2													24	1		23	3	1					
Camp Meade.....	2													24	1		18	3	1					
Camp Pike.....	2													24	1		19	3	1					
Camp Sherman.....	2													12	1		17	3	1					
Camp Taylor.....	2													24	1		21	3	1					
Camp Travis.....	2													12	1		22	3	1					
Camp Upton.....	2													20	1		18	3	1					
Grand totals of above items.....	32													228	16		316	48	15			215		

Total number of buildings in all units except remount stations and base hospitals—(Continued.)

[illegible]

Total number of buildings in all units except remount stations and base hospitals—Continued.

Fire station.	65, 23' 6" x 58'.		66, 23' 6" x 83'.		67, 31' x 67'.		68, 31' x 84' 6".		42, bathhouse.	Gas house, 30' x 16'.	73, Signal C. exp. sta.	Tel. cent. sta.	Tel. sta. and bart.	49, tel. and tel. bldg., 20' x 70'.	91, fem. tel. op. bart., 30' x 75'.	Women's lav., 14' x 28'.	Gasoline house.	Laundry bldg.	57, 58, bakery bldg., 3-oven.	Bakery bldg., 4-oven.	Sewage pump. sta.	Theater.	34, target storage, 20' x 21'.	34 M. gun. t. storage, 20' x 42'.	Main pump. sta.	Booster pump. sta.	41, latrines, 10-hole.	59A, P. O. building, 40' x 108'.	Centr. heat. plt.	Civil empl. bldg.	Refrig. plant.	Incineration plt.	Garbage tr. sta.	Sewage pump. sta.	Sewage d. bldg.	Filtration bldg.				
	8	...	24	16	...	16	4	26	...	6	6	1	1	1	1	...	...	1	1	1	5	12	16	16	21	4	112	5	56	1	8	16	16	4	10	1				
	Camp Custer.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Camp Devens.....	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Camp Dix.....	1	3
Camp Dodge.....
Camp Funston.....
Camp Gordon.....
Camp Grant.....
Camp Jackson.....
Camp Lee.....	2
Camp Lewis.....
Camp Meade.....
Camp Pike.....
Camp Sherman.....
Camp Taylor.....	8
Camp Travis.....
Camp Upton.....
Grand total of above items.....		8	24	16	...	16	2	3	...	16	...	...	...	16	4	26	...	6	6	10	5	12	16	16	21	4	112	5	56	1	8	16	16	16	4	10	1			

Total number of buildings in remount stations.

	No. 28, admin., 20' x 84'.	No. 7, off. qrt., 20' x 80' 6".	No. 46, bar-racks.			No. 10, 20' x 49'.	No. 47, mess.		No. 23, guard, 20' x 56'.	No. 31, store house, 60' x 108'.	No. 60, blacksmith, 31' 6" x 297'.	Stables, Nos. 36, 35.				No. 56, op. rooms, 21' x 23' 8".	No. 56, forage rms, 21' x 23' 8".	No. 37, wagon sheds.		No. 53, hay racks.		No. 54, feed trghs.		No. 61, dip. tanks, 7' x 72'.	No. 52, load. platfm., 20' x 254'.	No. 38, water. trghs., 10' long.	No. 25, lavatories.			Fencing, minimum 24,000 ft.	53	4		
			A, 20' x 119'.	B, 20' x 119'.	A, 20' x 133'.		20' x 133'.	20' x 84'.				24' x 190'.	24' x 250'.	24' x 250'.	20' x 190'.			28' x 600'.	20' x 300'.	600' long.	300' long.	14' x 56'.	14' x 49'.				14' x 14'.	40' x 90'.	60' x 140'.					
Camp Custer.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Camp Devens.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Camp Dix.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Camp Dodge.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Camp Funston.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Camp Gordon.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Camp Grant.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Camp Jackson.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Camp Lee.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Camp Lewis.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Camp Meade.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Camp Pike.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Camp Sherman.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Camp Taylor.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Camp Travis (facilities already provided).....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Camp Upton.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Grand totals in remount stations.....	15	15	15	15	15	15	15	15	15	15	15	16	60	44	69	60	150	60	150	60	150	60	150	60	150	60	15	15	900	15	15	15	53	4

Total number of buildings in all units except remount stations and base hospitals.

[illegible]

Total number of buildings in all units except remount stations and base hospitals—Continued.

	Guard-house.		Infirmaries, 90' x 110'.	Garages.			Stables.							Adminis- tration.			Maga- zine.		89. Telegraph and tele- phone office, 20' x 21'. Pump station.		Bar- racks.		Lavatories.					Adjutant's office.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
	16	20' x 56'. Barricaded wire stockade.		23	76	40' x 240'. 30' x 144'. 40' x 110'. 40' x 190'.	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

Total number of buildings in remount stations.

	No. 28, admin., 20' x 84'	No. 7, off. q'tt., 20' x 80' 6"	A, 20' x 119'. B, 20' x 119'. A, 20' x 133'. B, 20' x 133'.	No. 10, 20' x 49'.	No. 47, mess. 20' x 133'. 20' x 84'.	No. 29, guard, 20' x 56'.	No. 31, store house. 60' x 108'. 60' x 300'.	No. 50, blacksmith, 31' 6" x 297'.	Stables. No. 36. 24' x 190'. 24' x 250'. No. 35. 29' x 250'. 29' x 190'.		No. 56, op. rooms, 21' x 23' 8".	No. 56, forage rms., 21' x 23' 8".	No. 37, wag- on shed. 29' x 600'. 29' x 300'.	No. 53, hay racks. 600' long. 300' long.	No. 54, feed tr'ghs. 600' long. 300' long.	No. 51, dip. tanks, 7' x 72'.	No. 52, loading platform, 20' x 254'.	No. 38, water troughs, 10' long.	No. 25, lava- tories. 21' x 56'. 14' x 49'. 14' x 14'.	Fencing, minimum 24,000 ft.	No. p7, hay sheds. 40' x 90'. 60' x 140'.	No. 13, la- trines. 12' x 7'. 12' x 14'.	No. 14, showers. 9' x 12' 0". 9' x 14' 0". 9' x 21' 0".
Camp Beaugard.....	1	1	1	1	1	1	1	1	4	4	4	4	4	4	4	1	1	60	..	..	4	1	1
Camp Bowie.....	1	1	1	1	1	1	1	1	4	4	4	4	4	4	4	1	1	60	..	..	4	1	1
Camp Cody.....	1	1	1	1	1	1	1	1	4	4	4	4	4	4	4	1	1	60	..	..	4	1	1
Camp Doniphan.....	1	1	1	1	1	1	1	1	4	4	4	4	4	4	4	1	1	60	..	..	4	1	1
Camp Fremont.....	1	1	1	1	1	1	1	1	4	4	4	4	4	4	4	1	1	60	..	..	4	1	1
Camp Green.....	1	1	1	1	1	1	1	1	4	4	4	4	4	4	4	1	1	60	..	..	4	1	1
Camp Hancock.....	1	1	1	1	1	1	1	1	4	4	4	4	4	4	4	1	1	60	..	..	4	1	1
Camp Kearny.....	1	1	1	1	1	1	1	1	4	4	4	4	4	4	4	1	1	60	..	..	4	1	1
Camp Logan.....	1	1	1	1	1	1	1	1	4	4	4	4	4	4	4	1	1	60	..	..	4	1	1
Camp MacArthur.....	1	1	1	1	1	1	1	1	4	4	4	4	4	4	4	1	1	60	..	..	4	1	1
Camp McClellan.....	1	1	1	1	1	1	1	1	4	4	4	4	4	4	4	1	1	60	..	..	4	1	1
Camp Meville.....	1	1	1	1	1	1	1	1	4	4	4	4	4	4	4	1	1	60	..	..	4	1	1
Camp Sevier.....	1	1	1	1	1	1	1	1	4	4	4	4	4	4	4	1	1	60	..	..	4	1	1
Camp Shelby.....	1	1	1	1	1	1	1	1	4	4	4	4	4	4	4	1	1	60	..	..	4	1	1
Camp Sheridan.....	1	1	1	1	1	1	1	1	4	4	4	4	4	4	4	1	1	60	..	..	4	1	1
Camp Wadsworth.....	1	1	1	1	1	1	1	1	4	4	4	4	4	4	4	1	1	60	..	..	4	1	1
Camp Wheeler.....	1	1	1	1	1	1	1	1	4	4	4	4	4	4	4	1	1	60	..	..	4	1	1
Grand total in remount stations.....	16	16	16	16	16	16	16	16	64	64	64	64	160	64	160	16	16	960	..	..	64	16	48

Total number of buildings in base hospitals.

	B1, admin.	J, rec. ward.	C, off. ward, 80' 6" x 149' 6".	K3, sing. ward.	L2, doub. ward, 98' x 157".	M, isol. ward, 24' x 150' 6".	R2, psych. ward, 24' x 162".	Q, oper. pav., 24' x 93".	R, eye, ear pav., 24' x 104' 6".	F1, eye, ear pav., 81' x 150".	D, off. qtrs.	E, nurses' gr., 80' 6" x 149' 6".	N, barracks, 24' x 156".	H, post ex., 24' x 93".	Guardhouse, 24' x 35' 6".	I, mess and kitchen.	Q, laundry, 24' x 149' 6".	H, garage, 24' x 56".	H, shop, 24' x 139".	O, stores, 24' x 150' 6".	N, lavatory, 24' x 34' 6".	P, chapel, 24' x 58' 6".	P, mortuary, 24' x 35' 6".	Fire sta., 31' x 67".	Power house.	Latrines.	Showers.	
Camp Beauregard.....	1	1	1	8	4	1	1	1	1	1	1	1	3	1	1	1	1	1	1	3	2	1	1	2	1	10	8	
Camp Bowie.....	1	1	1	8	3	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	17	17	
Camp Cody.....	1	1	1	8	3	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	2	1	1	1	1	16	11	
Camp Doniphan.....	1	1	1	8	3	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	16	11	
Camp Fremont.....	1	1	1	8	3	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	17	17	
Camp Green.....	1	1	1	8	3	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	17	17	
Camp Hancock.....	1	1	1	8	3	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	17	17	
Camp Kearny.....	1	1	1	8	3	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	17	17	
Camp Logan.....	1	1	1	8	3	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	17	17	
Camp MacArthur.....	1	1	1	8	3	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	17	17	
Camp McClellan.....	1	1	1	8	3	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	17	17	
Camp Sevier.....	1	1	1	8	3	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	17	17	
Camp Shelby.....	1	1	1	8	3	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	17	17	
Camp Sheridan.....	1	1	1	8	3	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	17	17	
Camp Wadsworth.....	1	1	1	8	3	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	17	17	
Camp Wheeler.....	1	1	1	8	3	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	17	17	
Grand totals in base hospitals.....	14	2	15	8	86	39	15	16	16	16	18	16	73	16	16	16	16	16	16	16	65	15	16	14	5	1	43	36

1 In old hospital.

Gen. LITTELL (continuing). Take, for instance, the plan we had of three barracks in a row. We took the three barracks intended for three companies of 200 men each, and gave a barrack and a half to a company, dividing one barrack into two, and attaching that to the nearest one on the other side, in order to accommodate a company of 250 men.

The CHAIRMAN. What I am trying to get at is to have an explanation of what we have seen printed in the newspapers, and charged in the hearings before the Senate Committee on Military Affairs, that some of these barracks and quarters were too crowded, and that that was the cause, in part, of the unhealthy condition in some of the camps.

Gen. LITTELL. Even though these barracks did not have 500 cubic feet of air space for each man, they were unusually well supplied with windows and had good ventilation, so that the men could get plenty of air if they looked after the ventilation.

But we designed those barracks in the first place to provide for that number of men. If they have crowded more in there, they have done what was not intended.

The CHAIRMAN. The responsibility for that would lie with the division commander?

Gen. LITTELL. I should say so; yes, sir. But I think the complaints of overcrowding in these camps do not apply to the cantonments. I think the greatest amount of complaint they have is overcrowding in the camps.

As I understand it, the Surgeon General has claimed all along that there are too many men in a tent. He wants from five to six men in a tent, whereas the regulations governing that has prescribed eight or nine men in a tent.

Gen. SHARPE. The orders directing the arrangements of the National Guard camps directed that 12 men should be put in a tent. Our usual number of men that we put in a tent, by regulation, is eight or nine. We did not have sufficient canvas and they directed that 12 men should be housed in a tent. That number was later reduced to nine, and has since been reduced to five.

The CHAIRMAN. That is the recommendation of the Surgeon General, that the number should not be over six?

Gen. SHARPE. Yes, sir; at present.

The CHAIRMAN. What is the size of the tent in which they put 12 men?

Gen. LITTELL. It is 16 feet square.

The CHAIRMAN. Then the complaints that have been made do not refer to the National Army cantonments, but to the National Guard camps?

Gen. LITTELL. That is as I understand it. I have never known of any complaint extending to the National Army camps.

The CHAIRMAN. The question was asked the other day, and I would like to have a full explanation of it, as to why the War Department made a distinction between the camps of the National Army and the camps of the National Guard. What was the reason for that?

Gen. LITTELL. Of course I can only guess at that, Mr. Chairman, because we were not told why that was.

Gen. SHARPE. When they first started to establish the cantonments and the camps, I believe it was the intention to put them all

under canvas, but we told them we did not have it, and could not get the tentage. In the different recommendations I made as to the time when it would be possible to equip the troops, I always said except tents.

Therefore it was determined some time in April or May that we would have to put the National Army in cantonments. That decision was arrived at because it was assumed that the National Guard had a large portion of the tentage which it would require. I think that is the reason.

There was not any discrimination as between the National Guard and the National Army, because we could not house them, and did not have any possible way of getting tentage for the National Army, and the National Guard had possession of the tentage.

The CHAIRMAN. Is it not a good deal more expensive to build the National Army cantonments than to build the National Guard camps?

Gen. SHARPE. You mean as between the canvas and the wood?

The CHAIRMAN. Yes.

Gen. SHARPE. The cantonment is less expensive in the end, sir, because the canvas has to be renewed so often.

The CHAIRMAN. That is due to the fact that the canvas does not last as long as the wood; but I am talking about the original construction cost.

Gen. SHARPE. We had recently a statement showing a comparison of the cost as between the canvas and the cantonment, and the cost of the canvas had gone up enormously. While the original cost for the cantonment was greater than for the canvas, they are getting very close together now, and then when we have to renew the canvas once or twice a year, it soon makes the canvas much more expensive.

The CHAIRMAN. Then, as a matter of fact, it would have been more economical in the end if you had provided the same kind of camps for both?

Gen. SHARPE. I think it would, but it would have required about \$35,000,000 for the National Guard. There was a \$35,000,000 item for putting the National Guard into cantonments, but that was stricken out of the estimate.

The CHAIRMAN. Then, as I understand it, the only reason you know of for the distinction between the National Guard and the National Army was because the National Guard already had some tents?

Gen. SHARPE. Yes, sir.

The CHAIRMAN. But they did not have a sufficient number of tents for the whole National Guard force?

Gen. SHARPE. I do not know about that. They were supposed to have enough for them to go to camp.

The CHAIRMAN. You only had, when war was declared, about 160,000 National Guardsmen in the service, and now you have over 480,000.

Mr. KAHN. The companies were recruited up to full war strength.

Gen. SHARPE. There are over 400,000 National Guardsmen.

Mr. KAHN. So that certainly you did not have enough tentage for the entire strength of the National Guard when they were at full war strength.

Gen. SHARPE. That was the reason the instruction was published in general orders to put 12 men in a tent, instead of 5, to try to

accommodate more men than the regulations had said could be accommodated in a tent.

The CHAIRMAN. Certainly, however, when the plan was devised of building these different cantonments for the National Army and the National Guard and for a part of the Regular Army, wherever necessary, there must have been some discussion as to the reason for the distinction, and I do not think that is a very satisfactory one, that because the National Guard had a few tents, they ought to have been put entirely under canvas, and the men drafted in the Army should have so much better quarters, sanitary arrangements, sewage, and so forth.

Gen. SHARPE. In so far as our department was concerned, we simply stated the impossibility of getting the canvas to provide for the National Army cantonments, and then we were instructed to provide canvas for the National Guard and to build wooden barracks for the National Army.

Mr. McKENZIE. You understood that the order of the Army going to France would be, first the Regular Army, second the National Guard, and lastly the National Army, and under the belief that the National Guard would only be in camp perhaps for a short time it would be needless to build these permanent cantonments for them?

Gen. SHARPE. That was the understanding when we asked for the increased amount to turn the National Guard camps into cantonments. That was a matter in which we had no power to determine; we were simply instructed to provide cantonments for the National Army, and were informed that the National Guard would go into camps.

The CHAIRMAN. Who in the War Department is responsible for making this distinction?

Gen. SHARPE. I do not know, Mr. Chairman. The instructions came to us through the Chief of Staff.

The CHAIRMAN. We would have to find that out from the Chief of Staff or the Secretary of War?

Gen. SHARPE. Yes, sir.

Mr. ANTHONY. Who was the Chief of Staff at that time?

Gen. SHARPE. Gen. Scott was the Chief of Staff. I do not know whether that was determined before he went to Russia, or afterwards.

Gen. LITTELL. Part of it was done before and part of it was done afterwards.

Mr. KAHN. As I recall, when the troops were on the Mexican border, some of the general officers down there recommended that in the larger camps down there cantonments be built, either of wood or adobe, in preference to tents, and that that would be a saving to the Government. Was any action ever taken by the War Department on those recommendations?

Gen. SHARPE. They were authorized to put up cantonment construction down there when a regiment was going to be held there for a length of time which would justify it.

Mr. KAHN. From your experience down there it would seem that they would have tried to put up cantonments all over the country, wherever soldiers were to be accommodated. You do not know about that? That would rest with the General Staff?

Gen. SHARPE. Yes, sir; we simply made a statement that we did not have the tentage and could not get it.

Mr. KAHN. When I was on the Mexican border they said they preferred to have the cantonments, and that it would be a big saving, and they had recommended cantonments, and that even if the cantonments were to be built of adobe, it would be preferable to the tents.

Gen. SHARPE. A great many of the officers themselves did build their own adobe huts.

Mr. KAHN. Did the change of the plan raising the size of the companies from 200 to 250 men entail much additional expense?

Gen. LITTELL. Yes, sir; quite a little.

Mr. KAHN. It is just like a person first building a house figuring on a certain plan, and then finding that there are a lot of extras, and the extras and changes are the things that cost.

Gen. LITTELL. Yes, sir; you can readily see that. You can readily see about what it would be by the fact that we had to put two companies in barracks which were provided for three. We took three barracks to accommodate two companies, and so, of course, we had to build a lot of new barracks in the end.

Mr. KAHN. Did those new barracks cost you more for their construction than the original ones?

Gen. LITTELL. Not per capita. The new barracks we built were built to accommodate 250 men, and so they cost more than barracks for 200 men, but the unit cost was no greater, possibly a little bit less, for the reason that some of the utilities were different.

Mr. KAHN. Did I understand you to say you now have at the various cantonments and camps sufficient accommodations to take care of the next increment of 200,000 men of the first draft?

Gen. LITTELL. Yes, sir; that was intended.

Mr. KAHN. What do you mean by that?

Gen. LITTELL. We were given certain figures for each camp, to accommodate a certain number of troops, and we have that, and in some cases we have more than was originally intended, for the reason that some organizations have been added, and we have had to build for those.

Mr. KAHN. But you think there will be no complaint because of lack of accommodations when those 200,000 men go to the cantonments?

Gen. LITTELL. We built the buildings for a certain number of men, that is, the National Army cantonments, for 654,000 men. We have that capacity now.

In the embarkation camps, we have capacity for 43,505. In the quartermasters' training camp we have accommodations for 17,800, and we have also built cantonments, and are building them at Coast Artillery posts to provide for the increased companies of the National Guard Coast Artillery going in there, and we have built accommodations for them to the extent of 17,857 men. Then we have increased the size of the various Regular Army posts by building cantonments to the extent of 100,000 men.

Mr. KAHN. I think I asked you to put into the hearings a statement showing the cantonments you have constructed, their capacity and their cost.

Gen. LITTELL. Yes, sir. We have a tabulated statement of that.

Mr. ANTHONY. Who was it who formulated the plans for these great military cities you built which you call cantonments?

Gen. LITTELL. You mean the general plan?

Mr. ANTHONY. The general plan.

Gen. LITTELL. We called into service a number of men who were skilled in town planning, as it is called. They are men whose engineering duties call upon them to lay out cities, with all the utilities, sewers, water, and all that. Mr. Frederick Law Olmstead was one of the men working on that without cost.

Mr. ANTHONY. As I understand it, you worked jointly with the committee of the Council of National Defense?

Gen. LITTELL. Yes, sir; they act in an advisory capacity to us.

Mr. ANTHONY. Was it the committee of the Council of National Defense that laid out these plans?

Gen. LITTELL. No, sir; they assisted us by recommending men who were skilled in that sort of work.

Mr. ANTHONY. Here is what I want to get at: Were these plans the plans of the military department of the Government, or were they plans formulated by your civilian advisers?

Gen. LITTELL. Both. We drew the plans on suggestions we got from expert engineers, men whose business it was to provide those things.

Mr. ANTHONY. In regard to the authority exercised in the construction of these great military cities, was the Council of National Defense supreme in laying out these ideas, or did the Quartermaster General's Department of the Army formulate them and carry them out?

Gen. LITTELL. No, sir; their function was to act in an advisory capacity to us, and the Secretary of War so instructed us that that was their function.

Mr. ANTHONY. You really had two bodies at work. You had this civilian body called in, and you had the organization of the Quartermaster General's Department of the Army?

Gen. LITTELL. Yes, sir.

Mr. ANTHONY. Is it not true that the officers in the Quartermaster General's Department of the Army are fully competent to build these military camps with their own force, and with the knowledge and ability they have, without the assistance of this advisory board?

Gen. LITTELL. At the time that the cantonment construction was thrust upon us, the Quartermaster's Department did not have a sufficient force to handle it. We had to increase that portion of the Quartermaster General's Office very greatly in order to handle it, and we could not have handled it in the same time at all without the assistance and advice of this Committee of National Defense.

Mr. ANTHONY. There were 16 of the large cantonments?

Gen. LITTELL. Yes, sir.

Mr. ANTHONY. The method of letting the contracts for these cantonments was on the cost plus basis, was it not?

Gen. LITTELL. Yes, sir.

Mr. ANTHONY. What was the profit you allowed a contractor? There was no competitive bidding?

Gen. LITTELL. I have a table that shows the whole thing.

Mr. ANTHONY. What was the general average of profit allowed?

Gen. LITTELL. It figures out about 3 per cent—2.84 per cent.

Mr. ANTHONY. Was it not considered that 10 per cent should be allowed on the cost?

Gen. LITTELL. We have a copy of the contract. The contractor only gets 10 per cent on the cost, provided the profit is not over \$250,000, and the scale slides all the way down.

Mr. ANTHONY. What was the maximum of profit received by any contractor, the gross profit on any camp which you erected?

Gen. LITTELL. \$250,000.

Mr. ANTHONY. You limited it to \$250,000?

Gen. LITTELL. Yes, sir; no matter what he did.

Mr. ANTHONY. What was the greatest cost of any one cantonment?

Gen. LITTELL. Probably about \$10,000,000 would be the most expensive one.

Mr. ANTHONY. Which one was that?

Gen. LITTELL. I think that was the one at Petersburg, Va., \$11,300,000.

Mr. ANTHONY. Is it true that while you limited the profit to any one contractor to \$250,000 on any one camp, yet you found that there was a large amount of incidental work and additional work to be done at the conclusion of his contract, upon which additional profits were allowed?

Gen. LITTELL. No, sir; the fixed percentage of \$250,000 was based on a 6 per cent profit, based on the cost not to exceed \$3,500,000, and none of the contractors has gotten any increase in his fee because of the large amount of additional work he has done, and those contractors have done a great deal more than was contemplated in the original plan.

Mr. ANTHONY. I have heard the statement made that after the completion of some of these cantonments you found you needed roads, and you allowed the contractor to go ahead and construct a million dollars worth of roads, on which he got his 10 per cent. Is there anything in that?

Gen. LITTELL. No, sir.

Mr. ANTHONY. In a hearing held by the Committee on Naval Affairs, the statement was made that while the Army had limited the profit to the contractors to \$250,000, yet by giving them additional work, in some cases running as high as \$2,000,000 in certain cantonments, the contractors had been allowed excess profits of much more than the 10 per cent.

Gen. LITTELL. No, sir; that is incorrect.

Mr. ANTHONY. Such statements were made by authorities in the Navy Department to a House committee. What is the largest amount you have expended for roads, at any one of the cantonments?

Gen. LITTELL. I will put those figures in the record.

Mr. McKENZIE. General, can you put in the record a statement showing the amount and the character of the equipment you have sent to France? Have you got any table that will show that?

Gen. SHARPE. In the way of cloth?

Mr. McKENZIE. Yes.

Gen. SHARPE. You mean from the beginning up to the last shipment that was made?

Mr. McKENZIE. Yes; I will appreciate it very much if you can put in a table showing that.

Gen. SHARPE. We can do that.

(NOTE.—This information appears in the hearings on the Appropriation, "Clothing, Camp and Garrison Equipage.")

(Thereupon the committee adjourned to meet to-morrow, Thursday, January 17, 1918, at 10.30 o'clock a. m.)

ARMY APPROPRIATION BILL, 1919.

COMMITTEE ON MILITARY AFFAIRS,
HOUSE OF REPRESENTATIVES,
Washington, D. C., Thursday, January 17, 1918.

The committee met at 10.30 o'clock a. m., Hon. William J. Fields, presiding.

STATEMENT OF MAJ. GEN. HENRY G. SHARPE, QUARTERMASTER GENERAL, ACCOMPANIED BY BRIG. GEN. I. W. LITTELL, MAJ. R. C. MARSHALL, JR., AND MAJ. W. H. OURY, QUARTERMASTER CORPS—Continued.

CANTONMENT CONSTRUCTION.

Mr. LUNN. General, there are a number of things I would like to know regarding the cantonments. There is a great deal of interest, naturally, in the construction of those cantonments, how that work was done, and the arrangements as to the cost, a great many statements being made that exaggerated costs were allowed, and I think it would be a good idea for you to give us a statement regarding the construction of the cantonments, how the cost-plus plan operates, according to your contracts. I think a statement in regard to that would be of value. Perhaps it would be better to begin with the ground work and ask you whether or not you have had anything to do with the selection of the sites, whether that was up to you or somebody else.

Gen. LITTELL. I might begin by stating that way back, early in the year, at the usual time for preparing estimates for submission to Congress, the Quartermaster General was instructed to prepare estimates for housing a million men in cantonment shelter.

Mr. LUNN. This was prior to the declaration of war?

Gen. LITTELL. Yes, sir; at the usual time for making the estimates. The instructions did not state whether that number of men was to be divided into 32 divisions or any other number; it just gave the number of men for whom the cantonment shelter should be provided.

Estimates were prepared in accordance with existing approved plans in the Quartermaster General's office for cantonment construction, such as we had built from time to time along the border and at other places.

Those estimates were submitted in due course to the Secretary of War, and then we were, at the same time, directed to prepare an estimate for buildings of a more substantial character, say concrete, with steel laths, or something of that sort. We did that and that latter estimate amounted to about twice the amount of the other. It seemed to be a very stupendous figure on its face, and it was not approved. So an estimate for the construction of wooden shelter to take the place of the camps was submitted, and that finally got to Congress.

All this time we knew nothing about how it was to be divided. Later the Quartermaster General, on numerous occasions, requested

information as to where the cantonments were to be constructed, and in the mean time the Chief of Staff had submitted the matter of the selection of the camps to care for these million men to the War College, and finally the president of the War College prepared a memorandum to the Chief of Staff stating that they could not select the camps, that it would take a number of officers to do it and that they had not the time to spare from their duties at the War College. The Chief of Staff then turned it over to the various department commanders, who were directed to select the camp sites and prepare the necessary leases and make the leases for the camp sites.

That was done by each department commander designating a board of officers, and that board in every instance, I think, consisted of one of his immediate staff, that is, his chief of staff, or some other officer close to him, and a medical officer and a representative of the Quartermaster Corps from his personal staff.

They went out over the country and made selections and recommendations of camp sites to the department commanders, who forwarded the papers here to the Chief of Staff, with their recommendations, and that was finally acted upon by the Secretary of War, and he either approved or disapproved the selections.

Then we were notified that the camp site at such and such a place had been approved by the Secretary of War, and that we were to go ahead and construct our cantonments or camps as the case might be, on that particular location.

The camp sites for the National Army were all selected first, and instructions given to go ahead with the construction of the cantonments, and we were notified of the number of troops to provide for in each cantonment.

Previous to that, or at about the same time, a memorandum was submitted to the Secretary of War by the Army War College in reference to the cantonments and the camps for the National Guard. Their memorandum was sent to us with instructions from The Adjutant General to construct 16 cantonments for the National Army and 16 camps for the National Guard. Attention was invited to this memorandum of the War College authorities directing what kind of camps the National Guard camps were to be, that is, they were to be canvas camps.

Mr. LUNN. They were to be canvas camps, and they are at the present time not as desirable camps, from many standpoints, as the National Army camps are. Why were they placed in canvas instead of wooden barracks?

Gen. LITTELL. In the first place, I imagine there were various elements that entered into that, which, I believe, were the causes of deciding whether they should be camps or cantonments.

In the first place, we did not have funds enough to completely construct the 16 cantonments, and then to build 32 of those at the same time would have congested transportation, and would have also congested the lumber market and other material markets, so that it would have been practically impossible to have gotten them done, as it was difficult to get the stuff accepted by the railroads in order to get it there on time, to get the cantonments completed in time to take the quota of the draft at the dates prescribed.

Mr. LUNN. Was the principle followed to endeavor to force the construction to meet the date of the draft, or to withhold the date of the draft until the cantonments were ready for the men?

Gen. LITTELL. No, sir. We rushed the cantonments to take care of the men, because it was represented by the Provost Marshal General that to make any change in the draft orders, would throw everything into the utmost confusion and upset things generally, and cause the public to have a lack of confidence in the way the draft was being handled, and it would have been a very bad thing at the last moment to have issued orders countermanding the calling out of the draft.

Mr. LUNN. The draft order was fixed on the supposition that the cantonments would be ready at a certain time?

Gen. LITTELL. At certain dates. Then I presume that it was thought that some money could be saved by putting the troops into camps instead of into cantonments, for it was evidently thought that a number of these camps would not be occupied during the winter, that the troops would be moved away.

Mr. LUNN. Would go abroad?

Gen. LITTELL. Yes, sir. The National Guard troops had seen service on the border, and it was presumed they would be ready much sooner than the National Army men, who had never had any training before, and it was known that the latter would have to stay in this country through the winter, and possibly some time longer. But the National Guard, having had service on the Mexican border, and many of them just back, it was thought they could stand the life in camp, which is not at all unhealthy, under ordinary circumstances.

The Regulars are out in camps sometimes in very much colder weather than we have had, and the Surgeon General's desire was to house all these men in huts containing six men each. The huts would not have been any more comfortable than the tents, but they would have been cheaper, although they would not be more economical than a tent. Of course, a tent can be ventilated, or it can be made so hot that you can not live in it.

Mr. LUNN. A great deal of the sickness could easily be due to the failure of the men to take care of the hygienic conditions, as regards water and heat?

Gen. LITTELL. I think that is probably one great cause of so much sickness, that the men could not be educated how to live outdoors, because people do live outdoors all the time, in buildings that are not as warm as a tent, and yet they are very healthy people.

Mr. LUNN. I would like to bring out something in regard to the camp sites, for which we appropriate money to pay the rentals. Who fixed the rentals for the cantonment sites selected by these boards?

Gen. LITTELL. The department commanders.

Mr. LUNN. They fixed the rentals?

Gen. LITTELL. Yes, sir. Of course, the boards made their recommendations to the department commanders, who recommended approval to the Secretary of War, and it was finally decided by the Secretary of War.

Mr. LUNN. These rentals run all the way from 88 cents to \$20 an acre?

Gen. LITTELL. I have the scale.

Mr. LUNN. Could we have that in the record?

Gen. LITTELL. Yes, sir; I will submit that.

(The matter referred to is as follows:)

National Army camps—Approximate acreage and annual rental paid therefor. (Compiled Nov. 15, 1917.)

Name and location of camp.	Total annual rental.			Annual rental per acre.			Average annual rental for 5-year period.	Average rental per acre for 5-year period.	Remarks
	Acreage.	First year.	Second year.	After second year.	First year.	Second year.	After second year.		
Northeastern Department:									
Camp Devens, Ayer, Mass.....	9,602	\$55,264	\$55,264	\$55,264	\$5.74	\$5.74	\$5.74	\$5.74	
Eastern Department:									
Camp Tipton, Yaphank, Long Island, N. Y.....	15,646	13,857	13,857	13,857	.88	.88	.88	.88	
Camp Dix, Wrightstown, N. J.....	8,185	118,500	38,565	38,565	14.48	4.71	4.71	6.03	High rental first year in lieu of damage to crops.
Camp Meade, Admiral, Md.....	9,669	145,477	72,518	72,518	15.04	7.50	7.50	9.00	
Camp Lee, Petersburg, Va.....	8,600	109,500	109,500	109,500	12.74	12.74	12.74	12.74	
Southeastern Department:									
Camp Jackson, Columbus, S. C.....	2,737	7,725	7,725	7,725	2.82	2.82	2.82	2.82	
Camp Gordon, Atlanta, Ga.....	2,453	14,813	14,813	14,813	6.03	6.03	6.03	6.03	
Camp Pike, Little Rock, Ark.....	2,800								
Central Department:									
Camp Sherman, Chillicothe, Ohio....	1,739	25,935	25,935	25,935	15.00	15.00	15.00	15.00	Crop damage not to exceed \$25,935: additional average under condemnation 600.
Camp Taylor, Louisville, Ky.....	3,651	12,074	12,074	36,282	3.30	3.30	9.93	6.32	Crop damage, \$20,257
Camp Custer, Battle Creek, Mich....	5,995	80,940	59,960	59,960	13.00	10.00	10.00	11.00	Crop damage not to exceed \$4 per acre: additional average under negotiations 2,000.
Camp Grant, Rockford, Ill.....	5,635	112,700	112,700	112,700	20.00	20.00	20.00	20.00	Crop damage not fully determined.
Camp Dodge, Des Moines, Iowa....	2,914	27,359	33,143	33,143	9.28	11.37	11.37	10.97	
Camp Funston, Fort Riley, Kans. 1									
Southern Department:									
Camp Travis, Fort Sam Houston, Tex.	18,104	53,016	53,016	53,016	2.93	2.93	2.93	2.93	Donated by Pierce County.
Western Department:									
Camp Lewis, American Lake, Wash.	70,000								
Total.....	167,741	786,326	600,070	633,276	4.69	3.63	3.77	3.93	
Average.....									

: Located on Government reservation.

National Guard camps.—Approximate acreage and rental paid therefor. (Compiled Nov. 15, 1917.)

Name and location of camp	Acreage.	Annual rental.			Average annual rental per acre.		Remarks.
		First year.	Second year.	After second year.	First year.	Second year.	
Southeastern Department							
Camp Green, Charlotte, N. C.	2,407	\$17,826	\$17,826	\$17,826	\$7.40	\$7.40	Camp site proper rented for only 2 years; hospital site, \$1 for first and second years, \$4,000 for third year; remount site, \$304 per year for 5 years.
Camp Wadsworth, Spartanburg, S. C.	1,778	1,521	1,521	1,521	.85	.85	
Camp Sevier, Greenville, S. C.	1,900	1	1	1	4.11	17	
Camp Hancock, Augusta Ga.	1,777	7,306	306				
Camp Wheeler, Macon, Ga.	2,418	1,328	1,328	1,328	.54	.54	Artillery range of approximately 3,400 acres leased at \$2.39 per acre. Artillery range of approximately 6,000 acres being leased at \$13,000 per year. Lease for rifle range being completed. Lease for artillery range of 28,800 acres being handled.
Camp McClellan, Anniston, Ala.	3,760	3,801	3,801	3,801	1.01	1.01	
Camp Sheridan, Montgomery, Ala.	3,375	1	1	1			
Camp Shelby, Hattiesburg, Miss.	3,000	1	1	1			
Camp Beauregard, Alexandria, La.	1,945	11,411	11,411	11,411	6.18	6.18	Artillery range of approximately 3,400 acres leased at \$2.39 per acre. Artillery range of approximately 6,000 acres being leased at \$13,000 per year. Lease for rifle range being completed. Lease for artillery range of 28,800 acres being handled.
Camp MacArthur, Waco, Tex.	2,775	22,179	22,179	22,179	5.87	5.87	
Camp Logan, Houston, Tex.	2,196	1	1	1			
Camp Bowie, Fort Worth, Tex.	13,520	1	1	1			
Western Department							
Camp Cody, Deming, N. Mex.	12,000	1	1	1			Artillery range of approximately 3,400 acres leased at \$2.39 per acre. Artillery range of approximately 6,000 acres being leased at \$13,000 per year. Lease for rifle range being completed. Lease for artillery range of 28,800 acres being handled.
Camp Deming, Fort Huachuca, Ariz.	25,000	53,664	53,664	53,664	15	2.14	
Camp Keane, Linda Vista, Cal.							
Camp Fremont, Palo Alto, Cal.							
Total	78,639	99,041	112,042		.68	1.42	
Average							

1 Located on Government reservation

Mr. LUNN. It is true that at some of the camp sites the rental for the first two years is almost twice what it is later on?

Gen. LITTELL. Yes, sir.

Mr. LUNN. I looked into that matter in relation to some of the camp sites, and the rental for the first year in the case of Louisville is about half what it is the third year, and it looked rather strange why it should go from \$4 to \$9 per acre.

Mr. GORDON. I understood that the Louisville camp was located in a swamp.

Gen. LITTELL. No, sir; It is one of the best we have. Something of that sort was reported to the Secretary of War and he sent a special inspector from the Medical Department to Louisville to look over the situation and he said the camp site was in a favorable location.

Mr. LUNN. So that those charges about that camp site being in a swamp are not well founded?

Gen. LITTELL. No.

Mr. GORDON. Is it not a fact that they used oil to burn out the impurities and marsh grass that were in the camp, before locating the camp there?

Gen. LITTELL. That I do not know. I dare say the doctors would do that. They are doing that at all times, wherever they see a pool of water, to prevent the breeding of mosquitoes. They are using oil all the time for that purpose. We consider that Louisville site one of the best camp sites we have.

Mr. LUNN. How many acres are there in the Rockford, Ill., cantonment?

Gen. LITTELL. Five thousand six hundred and thirty-five acres.

Mr. LUNN. And the rental is \$20 an acre?

Gen. LITTELL. The rental is \$20 an acre; yes, sir.

Mr. LUNN. That is continuous?

Gen. LITTELL. Yes, sir; for the first, second, and third years, \$112,700. That is a flat rental of \$20 an acre.

Mr. LUNN. For three years. There is no reduction in the rental?

Gen. LITTELL. There is no reduction in the rental; no, sir.

Mr. LUNN. Is it a fact that the amount of these rentals was fixed by the board appointed by the department commander to select the site, and they were Army men and not civilians?

Gen. LITTELL. Yes, sir; that is right.

Mr. LUNN. It seems to me a very large rental, and if you figure the rental cost, the Government could condemn that land and take it at a less cost than \$20 an acre with the interest out.

Gen. LITTELL. We did in most cases recommend that the land should be purchased.

Mr. LUNN. Is there anything in the contract that would hinder the Government from taking it at any time?

Gen. LITTELL. I do not know. I have not seen the contract.

Mr. GORDON. The Government is bound by its own contracts, the same as anybody else.

Mr. ANTHONY. Are not those leases in your office?

Gen. LITTELL. They may be filed in the Quartermaster General's Office, but it is the work of the construction and repair branch to pay the rentals.

Mr. LUNN. Your department pays the rent, does it not, but you had nothing to do with fixing the amount of the rent?

Gen. LITTELL. No, sir; we had nothing to do with that.

Mr. LUNN. Were there any of the cantonment sites presented to the Government?

Gen. LITTELL. Yes, sir; the one at Camp Lewis.

Mr. LUNN. Where is that located?

Gen. LITTELL. At Tacoma, Wash.

Mr. LUNN. What is the acreage of that site?

Gen. LITTELL. That is the largest one we have, I think, although possibly it may not be quite as large as Anniston. It is located at American Lake, and it contains 70,000 acres.

Mr. LUNN. It was donated to the Government?

Gen. LITTELL. Yes, sir.

Mr. LUNN. What kind of land is it; valuable land?

Gen. LITTELL. It appears to be a most excellent site for camp ground. It is principally sand; it is a sandy soil. There is pine and oak on it.

Mr. McKENZIE. Can you put into the hearings as a part of your statement the facts showing how much was contributed at each one of the different cantonments by the people?

Gen. LITTELL. I presume we could get that information in time, as to just what each city and town in the vicinity of these places contributed. They contributed various things.

Mr. LUNN. How were the contributions by the various citizens made?

Gen. LITTELL. In various ways. They offered to bring the water up to the reservation, and all sorts of things of that kind, and build a highway, or extend their highways to the camp, or up to the camp.

Mr. GORDON. Were these offers accepted in all cases?

Gen. LITTELL. I presume so, on the acceptance of the site.

Mr. HULL. Were they always complied with?

Gen. LITTELL. So far as we know, up to date.

Mr. HULL. The cities have always done as they agreed to do?

Gen. LITTELL. So far as we know.

Mr. LUNN. That was one site which was contributed to the Government. Were there any others?

Gen. LITTELL. The site at Little Rock, Ark., I think was contributed.

Mr. LUNN. What is the acreage there?

Gen. LITTELL. The acreage at Little Rock is 2,800.

Mr. LUNN. What is the acreage at Anniston; you said that was one of your largest camps?

Gen. LITTELL. That is a camp, and is located on a Government reservation that was purchased by the Government some time ago. The completion of it was accomplished just about the time we were beginning our estimates.

Mr. LUNN. There was no charge; that is Government land?

Gen. LITTELL. No charge; no, sir. That is large enough for several divisions.

Mr. LUNN. What was the amount of rental for the Yaphank Camp, Camp Upton, Long Island?

Gen. LITTELL. The rental for the first year is \$13,857, and the same rental every year. The amount of the acreage is 15,646 acres.

Mr. LUNN. What is that rental per acre?

Gen. LITTELL. That is 88 cents per acre.

Mr. LUNN. Those are the extremes, 88 cents per acre at Yaphank and \$20 an acre at Rockford, Ill.

Gen. LITTELL. Yes sir. The land at Yaphank is covered with scrub.

Mr. QUIN. I would like to ask you about Camp Shelby, in Mississippi.

Mr. LUNN. I would suggest that you put in the record a list of all the camp sites and the amount of rental you pay for each one.

Mr. FIELDS. You would like to have that in the record?

Mr. LUNN. Yes, sir.

(The matter referred to is as follows:)

Camp sites.—Rental of land for camps and other purposes, where located, area, and rental rate.

Where located.	Area.	Rental rate per annum.
Annapolls Junction, Md.....	9,000 acres.....	\$225,000.00
Cantonment, Atlanta, Ga.....	50 acres.....	490.80
Concentration camp, Atlanta, Ga.....	287 acres.....	1,434.96
Cantonment, Atlanta, Ga.....	126.78 acres.....	2,209.32
Do.....	47 acres.....	470.14
Do.....	121 acres.....	602.40
Do.....	65 acres.....	650.04
Do.....	24 acres.....	240.00
Do.....	53 acres.....	529.92
Do.....	330 acres.....	1,650.00
Do.....	101½ acres.....	1,001.04
Atlanta, Ga.....	42½ acres.....	425.04
Do.....	130 acres.....	1,300.00
Do.....	50 acres.....	240.00
Camp, Adams County, Pa.....	20 acres.....	720.00
Camp site Auburn, N. Y.....	2 acres.....	480.00
Concentration camp, Atlanta, Ga.....	30 acres.....	150.00
Do.....	320 acres.....	1,600.20
Remount depot, Augusta, Ga.....	100 acres.....	300.00
Camp site, Allentown, Pa.....	Fair grounds and buildings.....	37,500.00
Camp site Anniston, Ala.....	3 acres.....	52.00
Remount depot, Augusta, Ga.....	135 acres.....	405.00
Training grounds, Augusta, Ga.....	2,000 acres.....	1.00
Camp site, Ayer, Mass.....	13 acres.....	65.00
Do.....	73 acres.....	109.50
Do.....	6 acres.....	9.00
Do.....	.....do.....	9.00
Do.....	67 acres.....	375.00
Do.....	10 acres.....	15.00
Do.....	49 acres.....	73.50
Do.....	15 acres.....	22.50
Do.....	1 acre.....	100.00
Do.....	35 acres and buildings.....	500.00
Do.....	180 acres.....	300.00
Do.....	51 acres.....	153.00
Do.....	15 acres.....	250.00
Do.....	2 acres.....	3.00
Do.....	35 acres.....	70.00
Do.....	12 acres.....	18.00
Do.....	½ acre.....	12.00
Do.....	17 acres.....	25.50
Do.....	65 acres.....	97.50
Do.....	½ acre and buildings.....	150.00
Do.....	½ acre and buildings.....	420.00
Ayer, Mass.....	40 acres and buildings.....	300.00
Battle Creek, Mich.....	5,996 acres.....	89,940.00
Training ground, Bibb County, Ga.....	31 acres.....	1.00
Camp Beekmantown, N. Y.....	8 acres.....	25.00
Camp site, Belleville, N. J.....	.....	600.00
Camp site, Boxford, Mass.....	170 acres.....	3,650.00
School of Trench Warfare, Brownsville, Tex.....	15 acres.....	180.00
Camp site, Brownsville, Tex.....	2 lots.....	72.00
Target range, Brownsville, Tex.....	1 acre.....	60.00
Do.....	1½ acres.....	120.00
Do.....	.....	1.00

Camp sites.—Rental of land for camps and other purposes, where located, area, and rental rate—Continued.

Where located.	Area.	Rental rate per annum.
Mounted drill ground, Brownsville, Tex.....	16 acres.....	\$192.00
Camp site, Brownsville, Tex.....	8 acres.....	200.04
Do.....	2 lots.....	96.00
Site for motor repair shop, Brownsville, Tex.....	Blocks 193 and 194.....	540.00
Site for base hospital, Brownsville, Tex.....	Blocks 261-262, 279-290.....	600.00
Do.....	8 lots.....	120.00
Target range, Buena Vista, P. I.....	31.8 hectares.....	133.56
Drill grounds, Bexar County, Tex.....	209½ acres.....	2,796.00
Target range, Bexar County, Tex.....	565 acres.....	3,000.00
Do.....	1,490 acres.....	3,306.60
Do.....	1,753 acres.....	4,404.00
Do.....	946 acres.....	2,400.00
Do.....	116 ac's.....	1,152.00
Drill grounds, Bexar County, Tex.....	187.8 ac's.....	1,872.00
Do.....	150 ac's.....	1,500.00
Do.....	48 acres.....	600.00
Do.....	25 ac's.....	48.00
Roadway, Bexar County, Tex.....	40 feet wide.....	319.20
Target range, Bexar County, Tex.....	8,200 ac's.....	12,732.00
Chillicothe, Ohio.....	1,423.52 acres, 219.7 acres.....	2,746.25
Cantonment and target range, Cebu, P. I.....	5 2 hectars.....	32.40
Do.....	6,070 square meters.....	3.75
Do.....	7,082 square meters.....	4.36
Do.....	6,068 square meters.....	3.75
Do.....	1 hectare.....	6.25
Do.....	2 4 hectares.....	15.00
Do.....	1 hectare.....	6.25
Training grounds, South Carolina.....	1,900 acres.....	1.00
Camp site, Calexico, Cal.....	17 acres.....	600.00
Do.....	.....	2,400.00
Target range, Colchester, Vt.....	98 ac's.....	276.00
Camp Candelaria, Tex.....	7 ac's.....	360.00
Target range, Corpus Christi, Tex.....	5 ac's.....	60.00
Camp Columbus, N. Mex.....	Block 37, lots 7 and 8.....	12.00
Do.....	Block 51, lots 7 and 8.....	12.00
Do.....	Block 28, lots 23 and 24.....	12.00
Do.....	Block 27, lots 11 and 12.....	12.00
Do.....	Block 46, lot 8.....	6.00
Do.....	.....	90.00
Do.....	Block 35, lot 5.....	6.00
Do.....	Block 61, lot 3.....	6.00
Do.....	Block 28, lots 18 and 19.....	12.00
Do.....	Block 37, lot 283.....	12.00
Do.....	.....	240.00
Do.....	Block 29, lots 1 and 2.....	12.00
Do.....	Block 36, lots 6 and 7.....	12.00
Do.....	Block 60, lots 1-11.....	72.00
Columbus, N. Mex.....	Block 35, lot 4.....	6.00
Do.....	Block 47, lot 1.....	6.00
Do.....	Block 27, lots 6 and 7.....	12.00
Do.....	Block 26, lots 1, 2, and 3.....	18.00
Do.....	Block 52, lots 3 and 4.....	12.00
Do.....	Block 35, lots 1 and 2.....	12.00
Camp site, Columbus, N. Mex.....	Block 34, lot 7.....	6.00
Do.....	32 ac's.....	900.00
Do.....	Block 28, lots 15 and 16.....	12.00
Do.....	Block 46, lots 4, 5, and 6.....	18.00
Do.....	Block 36, lot 22.....	6.00
Columbus, N. Mex.....	Block 39, lots 3 and 4.....	12.00
Do.....	Block 50, lots 11 and 12.....	12.00
Do.....	Block 47, lot 5.....	6.00
Do.....	Block 51, lots 1 and 2.....	12.00
Do.....	Block 50, lots 9 and 10.....	12.00
Do.....	Block 34, lot 6.....	6.00
Camp site, Columbus, N. Mex.....	Block 47, lots 7 and 8.....	12.00
Do.....	Block 29, lots 23 and 24.....	12.00
Do.....	Block 45, lots 1, 2, 3, and 4.....	24.00
Do.....	Block 34, lot 5; block 47, lot 3.....	12.00
Do.....	.....	540.00
Columbus, N. Mex.....	Block 52, lots 7 and 8.....	12.00
Do.....	Block 36, lots 18 and 19.....	12.00
Do.....	Block 40, lots 1 and 5.....	30.00
Do.....	80 acres.....	360.00
Do.....	Block 39, lots 1 and 2; block 146, lot 2.....	30.00
Do.....	Block 28, lot 22.....	6.00

Camp sites.—Rental of land for camps and other purposes, where located, area, and rental rate—Continued.

Where located.	Area.	Rental rate per annum.
Camp site, Columbus, N. Mex.....	1 lot.....	\$72.00
Do.....	Block 61, lot 1.....	6.00
Do.....	25 acres.....	1,200.00
Do.....	Block 27, lots 8 and 9.....	12.00
Columbus, N. Mex.....	Block 29, lots 3 and 4.....	12.00
Do.....	Block 35, lot 22.....	6.00
Do.....	Block 36, lot 23.....	6.00
Do.....	Block 34, lots 2 and 3.....	12.00
Do.....	Block 46, lots 11 and 12.....	12.00
Do.....	Block 37, lot 6.....	6.00
Do.....	Block 28, lot 17.....	6.00
Camp site, Columbus, N. Mex.....	Block 39, lots 10 and 11.....	12.00
Do.....	Block 35, lots 12, 13, and 14..	18.00
Do.....	Block 34, lot 9.....	6.00
Do.....	Block 35, lots 6 and 11.....	36.00
Do.....	Block 27, lot 1.....	6.00
Do.....	5.85 acres.....	276.00
Roadway, Columbus, N. Mex.....	25 feet wide.....	50.00
Camp, Columbus, N. Mex.....	Block 39, lots 5 and 6.....	12.00
Do.....	Block 40, lots 7 and 11.....	30.00
Do.....	Block 47, lot 6.....	6.00
Do.....	Block 50, lots 7 and 8; block 52, lots 5 and 6.....	24.00
Do.....	Block 49, lots 2 and 3.....	12.00
Do.....	Block 28, lots 7 and 11.....	36.00
Camp site, Columbus, N. Mex.....	Block 38, lots 1-3; block 34, lot 10; block 50, lots 1 and 2.....	36.00
Roadway, Columbus, N. Mex.....		1.00
Camp, Columbus, N. Mex.....	Block 45, lots 4, 5, and 6.....	18.00
Do.....	Block 51, lot 9.....	6.00
Do.....	Block 47, lot 2.....	6.00
Do.....	Block 28, lots 20 and 21.....	12.00
Do.....		6.00
Do.....	Block 40, lots 1-6.....	36.00
Do.....	Block 37, lot 9.....	6.00
Do.....	Block 33, block 45.....	222.00
Do.....	22 lots.....	132.00
Do.....	14 lots.....	318.00
Do.....	Block 36, lots 1, 2.....	12.00
Camp, Corpus Christi, Tex.....	120 acres.....	3,600.00
Target range, Corpus Christi, Tex.....	5 acres.....	60.00
Cantonment, Des Moines, Iowa.....	2,914.42 acres.....	27,358.90
Camp site, Dolores, Tex.....	100 acres.....	180.00
Camp site, Deming, N. Mex.....	Sections 20, 21, 28.....	1.00
Camp, Detroit, Mich.....		594.59
Do.....		189.19
Camp site, Douglas, Ariz.....	Block 11, lot 2.....	48.00
Do.....	Block 10, lot 4.....	48.00
Do.....	Block 9, lot 3.....	12.00
Do.....	Block 10, lot 1.....	48.00
Do.....	Block 2, lot 6.....	24.00
Do.....	Blocks 13, 16.....	96.00
Hospital site, Douglas, Ariz.....	Block 26.....	450.00
Camp site, Douglas, Ariz.....	29 lots.....	796.00
Do.....	Blocks 1-7.....	144.00
Do.....	Block 102, lots 5, 6, and 7.....	1.00
Do.....	160 acres.....	300.00
Do.....	Block 6, lot 5; block 7, lots 9-14; block 9, lot 4.....	96.00
Do.....	31 acres.....	480.00
Do.....	80 acres.....	200.00
Do.....	Block 11, lot 1.....	25.00
Do.....	40 acres.....	1.00
Do.....	Block 18, lots 1, 2.....	24.00
Do.....	Block 2.....	1.00
Do.....	Block 10, lot 3.....	48.00
Do.....	Block 6, lots 7, 8.....	48.00
Camp site, Del Rio, Tex.....	Block 35, lots 4, 5.....	6.00
Do.....	Block 35, lots 1, 2, 9, and 10..	12.00
Do.....	Block 33, lots 8, 9.....	6.00
Do.....	Block 44, lots 1, 2, 3, 4.....	12.00
Do.....	Block 28, lots 9, 10.....	6.00
Do.....	Block 34, lots 45; block 35, lots 6, 7.....	12.00
Do.....	Block 42, lot 7.....	3.00
Hospital site, Del Rio, Tex.....	4 acres.....	120.00
Camp, Del Rio, Tex.....	Block 34, lots 3, 8.....	6.00
Do.....	Block 28, lots 4, 7.....	12.00
Do.....	Block 42, lots 4, 5, 10.....	9.00

Camp sites.—Rental of land for camps and other purposes, where located, area, and rental rate—Continued.

Where located.	Area.	Rental rate per annum.
Camp, Del Rio, Tex.....	Block 43, lots 5, 6.....	\$6.00
Do.....	Block 36, lots 8, 9, 10.....	66.00
Camp site, Del Rio, Tex.....	Block 42, lots 1, 2, 3, 8, 9.....	15.00
Do.....	Block 28, lot 3.....	3.00
Do.....	20 lots.....	120.00
Do.....	Block 36, lots 1-5.....	15.00
Do.....	7 lots.....	21.00
Do.....	60 lots.....	600.00
Do.....	5 acres.....	360.00
Do.....	2 acres.....	840.00
Do.....	Block 3, lots 1, 10.....	60.00
Do.....	Block 43, lots 1, 2.....	6.00
Do.....	Block 26, lots 3, 4, 5.....	9.00
Do.....	Block 26, lots 6, 7.....	6.00
Do.....	Block 43, lots 3, 4, 7.....	9.00
Do.....	Block 28, lots 8-9.....	6.00
Do.....	Block 34, lots 9-10.....	6.00
Do.....	Block 27, lot 3; block 42, lot 6.....	6.00
Do.....	Block 27, lots 1, 10; block 28, lots 1-2; block 36, lots 6-7.....	30.00
Do.....	Block 27, lots 1-2.....	6.00
Hospital site, Deming, N. Mex.....	Block 1; block A B.....	1.00
Fort Des Moines, Iowa.....	40 acres.....	(1)
Target range, El Paso, Tex.....	480 acres.....	120.00
Camp, El Paso, Tex.....	.....	12.00
Do.....	.....	12.00
Do.....	2 tracts.....	24.00
Do.....	157,500 square feet.....	12.00
Do.....	.....	36.00
Do.....	Block H.....	120.00
Do.....	.....	12.00
Training camp, Eatontown, N. J.....	381 acres.....	5,000.00
Camp site, Eagle Pass, Tex.....	95 acres.....	1,500.00
Do.....	40 acres.....	12.00
Fort Myer, Va., camp.....	31 acres.....	1,200.00
Training grounds, McPherson, Ga.....	138½ acres.....	150.00
Camp, Fort Myer, Va.....	21 acres.....	600.00
Camp, Fabens, Tex.....	Blocks 21, 22, 23.....	240.00
Camp, Framingham, Mass.....	103 acres.....	1,800.00
Do.....	.....	1.00
Target range, Fabens, Tex.....	10 acres.....	120.00
Camp, Gettysburg, Pa.....	1 acre.....	24.96
Do.....	34 acres.....	1,020.00
Do.....	.....	132.00
Do.....	.....	.....
Camp, Greenfield, Mass.....	28 acres.....	150.00
Camp, Gettysburg, Pa.....	1 acre.....	30.00
Camp, Great Neck, L. I.....	47 acres.....	1.00
Do.....	10 acres.....	1.00
Geddes, Onondaga County, N. Y.....	500 acres.....	1.00
Camp, Glen Springs, Tex.....	.....	180.00
Dumping ground, Greenville, S. C.....	Gulch.....	1.00
Camp, Hempstead Plains, N. Y.....	395 acres.....	180.00
Camp, Harlingen, Tex.....	11 blocks, 23 lots.....	60.00
Camp, L. J. Hearn, Cal.....	107 acres.....	1,200.00
Camp Houston, Tex.....	2,005.94 acres.....	1,149.60
Harvard, Mass.....	14 acres.....	22.00
Camp Harvard, Mass.....	14 acres.....	21.00
Do.....	8 acres.....	12.00
Do.....	42 acres.....	500.00
Do.....	1 acre.....	40.00
Do.....	2 acres.....	6.00
Do.....	6 acres.....	350.00
Do.....	5 acres.....	7.50
Do.....	2 acres.....	3.00
Do.....	2 acres.....	3.00
Do.....	2 acres.....	3.00
Do.....	2 acres.....	3.00
Do.....	12 acres.....	18.00
Do.....	44 acres.....	26.00
Camp and buildings, Harvard, Mass.....	9 acres.....	151.00
Do.....	2 acres.....	3.00
Do.....	27 acres.....	49.50
Do.....	2 acres.....	150.00
Do.....	101 acres.....	382.50
Do.....	One-fourth acre.....	100.00

¹ One-fifth of the corn crop each month.

Camp sites.—Rental of land for camps and other purposes, where located, area, and rental rate—Continued.

Where located.	Area.	Rental rate per annum.
Buildings, Harvard, Mass.	11 acres	\$50.00
Do.	6 acres	9.00
Do.	50 acres	75.00
Do.	7 acres	10.50
Do.	60 acres	180.00
Camp Harvard, Mass.	10 acres	15.00
Do.	126 acres	700.00
Do.	4 acres	6.00
Do.	5 acres	7.50
Do.	9 acres	13.50
Do.	70 acres	105.00
Do.	45 acres	67.50
Do.	4 acres	6.00
Do.	1,127½ acres	2,785.00
Do.	11 acres	16.50
Do.	112 acres	900.00
Camps and buildings, Harvard, Mass.	17 acres	20.00
Do.	45 acres	600.00
Do.	4 acres	6.00
Do.	7 acres	60.00
Do.	20 acres	30.00
Do.	35 acres	52.50
Do.	12 acres	18.00
Do.	32 acres	160.00
Do.	1 acre	1.50
Do.	26 acres	52.00
Do.	300 acres	1,600.00
Buildings, Harvard, Mass.	1 acre	150.00
Do.	65 acres	600.00
Camp Harvard, Mass.	17 acres	25.50
Do.	11 acres	16.50
Do.	9 acres	13.50
Do.	25 acres	37.50
Camps and buildings, Harvard, Mass.	90 acres	700.00
Drill grounds, Houston, Tex.	162 acres	12.00
Camp site, Houston, Tex.	2,005.94 acres	18,333.00
Do.	10½ acres	1,015.00
Camp and buildings, Harvard, Mass.	45 acres	250.00
Do.	9 acres	13.50
Do.	18 acres	27.00
Do.	139 acres	208.50
Do.	46 acres	69.00
Do.	20 acres	30.00
Do.	13 acres	19.50
Do.	5 acres	150.00
Do.	3 acres	18.00
Prophylaxis station, Honolulu, Hawaii	1,000 square feet	300.00
Camp Houston, Tex.	509.96 acres	1,539.88
Drill grounds, Houston, Tex.	339.86 acres	339.86
Target range, Houston, Tex.	456 acres	1,368.00
Do.	275 acres	725.00
Cantonment, Jefferson County, Ky.	325 acres	3,272.20
Regimental Hd., Jeffersonville	17 acres	900.00
Camp site, Indio, Tex.		120.00
Camp La Noria, Tex.	2 sections	240.00
Camp site, Lowell, Ariz.		1.00
Camp La Jitas, Tex.	2 acres	192.00
Target range, Laredo, Tex.	562 acres	420.00
Camp Laredo, Tex.	Blocks 932, 1140, 41, 43	15.00
Do.	35 blocks	1.00
Do.	32 blocks	1,084.00
Do.	6 blocks	100.00
Target range, Leichuang, China	1,200,000 square feet	180.00
Do.		
Camp site, Lancaster, Mass.	16 acres	24.00
Do.	47 acres	70.50
Do.	16 acres	24.00
Do.	1 acre	215.00
Do.	1 acre	50.00
Do.	40 acres	60.00
Do.	69 acres	103.50
Do.	10 acres	15.00
Do.	18 acres	27.00
Do.	266 acres	399.00
Do.	8 acres	12.00
Do.	6 acres	120.00
Do.	83 acres	197.50
Do.	14 acres	21.00
Do.	50 acres	300.00

Camp sites.—Rental of land for camps and other purposes, where located, area, and rental rate—Continued.

Where located.	Area.	Rental rate per annum.
Camp site, Lancaster, Mass.....	108 acres.....	\$400.00
Do.....	46 acres.....	350.00
Do.....	56 acres.....	600.00
Do.....	102 acres.....	147.00
Do.....	63 acres.....	480.00
Do.....	98 acres.....	300.00
Do.....	18 acres.....	27.00
Do.....	38 acres.....	300.00
Do.....	3 acres.....	36.00
Do.....	12 acres.....	18.00
Do.....	54 acres.....	81.00
Do.....	63 acres.....	100.00
Do.....	46 acres.....	60.00
Do.....	.....	45.00
Do.....	39 acres.....	55.50
Do.....	4 acres.....	6.00
Do.....	54 acres.....	81.00
Do.....	12 acres.....	18.00
Do.....	76 acres.....	114.00
Do.....	36 acres.....	54.00
Do.....	60 acres.....	90.00
Do.....	12 acres.....	18.00
Do.....	18 acres.....	27.00
Do.....	62 acres.....	93.00
Do.....	59 acres.....	88.50
Do.....	117 acres.....	175.50
Do.....	13 acres.....	19.50
Do.....	54 acres.....	81.00
Do.....	12 acres.....	18.00
Do.....	16 acres.....	1,200.00
Do.....	24 acres.....	250.00
Do.....	81 acres.....	121.50
Do.....	76 acres.....	114.00
Do.....	46 acres.....	60.00
Do.....	27 acres.....	40.50
Do.....	14 acres.....	300.00
Do.....	100 acres.....	150.00
Do.....	47 acres.....	70.50
Do.....	91 acres.....	136.50
Do.....	12 acres.....	18.00
Do.....	5 acres.....	7.50
Do.....	10 acres.....	15.00
Do.....	49 acres.....	73.50
Do.....	11 acres.....	16.50
Do.....	76 acres.....	114.00
Do.....	192 acres.....	288.00
Do.....	33 acres.....	49.50
Do.....	22 acres.....	33.00
Do.....	6 acres.....	9.00
Do.....	22 acres.....	110.00
Do.....	124 acres.....	96.00
Do.....	204 acres.....	30.75
Do.....	1 acre.....	250.00
Do.....	1 acre.....	200.00
Do.....	22 acres.....	33.00
Do.....	39 acres.....	58.50
Do.....	7 acres.....	10.50
Do.....	63 acres.....	94.50
Do.....	24 acres.....	36.00
Do.....	32 acres.....	250.00
Do.....	4 acres.....	200.00
Do.....	17 acres.....	200.00
Do.....	3 acres.....	600.00
Do.....	do.....	350.00
Do.....	1 acre.....	25.00
Do.....	5 acres.....	420.00
Do.....	1 acre.....	400.00
Do.....	24 acres.....	360.00
Do.....	3 acres.....	360.00
Do.....	1 acre.....	300.00
Do.....	20 acres.....	360.00
Do.....	53 acres.....	1,000.00
Do.....	1 acre.....	175.00
Do.....	do.....	240.00
Do.....	14 acre.....	150.00
Do.....	594 acres.....	89.25
Do.....	1 acre.....	60.00
Do.....	5 acres.....	150.00

Camp sites.—Rental of land for camps and other purposes, where located, area, and rental rate—Continued.

Where located.	Area.	Rental rate per annum.
Camp site, Lancaster, Mass.	1 acre	\$1,000.00
Do.	5 acres	150.00
Do.	25 acres	96.00
Do.	1½ acres	150.00
Do.	¾ acre	300.00
Do.	3½ acres	225.00
Do.	1 acre	350.00
Do.	104 acres	156.00
Do.	3 acres	1,000.00
Do.	60 acres	370.00
Do.	35 acres	500.00
Do.	13 acres	150.00
Do.	2 acres	400.00
Do.	7 acres	10.50
Do.	¼ acre	25.00
Do.	¾ acre	100.00
Do.	12 acres	18.00
Do.	1 acre	1.50
Do.	33½ acres	420.00
Do.	16 acres	240.00
Do.	¼ acre	200.00
Do.	12 acres	18.00
Do.	46 acres	60.00
Do.	32 acres	48.00
Do.	37 acres	55.50
Do.	12 acres	18.00
Do.	12 acres	18.00
Do.	1 acre	400.00
Do.	1 acre	200.00
Do.	1 acre	75.00
Do.	2 acres	400.00
Do.	¼ acre	200.00
Do.	83 acres	1,350.00
Do.	27 acres	40.50
Do.	½ acre	200.00
Do.	40 acres	60.00
Do.	28 acres	42.00
Do.	20 acres	30.00
Do.	86 acres	129.00
Do.	1½ acres	200.00
Do.	107 acres	181.50
Do.	100 acres	900.00
Do.	15 acres	150.00
Do.	24 acres	33.00
Do.	34 acres	60.00
Do.	6 acres	300.00
Do.	251 acres	376.50
Do.	37 acres	179.50
Do.	11 acres	17.50
Do.	3½ acres	250.00
Do.	2½ acres	39.00
Do.	1½ acres	40.00
Cantonment, camp site, Mercedes, Tex.	123,608 acres	1,000.00
Camp McAllen, Tex.		12.00
Camp site, Texas.	8.6 acres	200.04
Camp site, Madero, Tex.		1.00
Training grounds, Macon, Ga.	2,229 acres	1.00
Corral Marathon, Tex.	9,000 square feet	48.00
Campsite and parking grounds, Marfa, Tex.	42,000 square feet	240.00
Target range, Marfa, Tex.	450,000 square yards	480.00
Military Reservation, McGrath, Camp, P. I.	552,514 square meters	868.20
Do.	116,118 square meters	214.20
Do.	655 square meters	14.52
Camp site and parking ground, Marfa, Tex.		240.00
Training grounds, Madison Barracks, N. Y.	44 acres	150.00
Do.	2 acres	30.00
Do.	5 acres	180.00
Do.	10 acres	360.00
Do.	1 acre	75.00
Do.	11 acres	60.00
Camp Madison Barracks, N. Y.	25 acres	2,500.00
Training quarters, Madison Barracks, N. Y.	50 acres	1,500.00
Do.	5 acres	60.00
Camp site, Marfa, Tex.	25 acres	1,500.00
Camp site, Mission, Tex.		120.00
Remount depot, Montgomery, Ala.	160 acres	800.00

1 For period of lease.

Camp sites.—Rental of land for camps and other purposes, where located, area, and rental rate—Continued.

Where located.	Area.	Rental rate per annum.
Camp site, McAllen, Tex.....	7.5 acres.....	\$200.04
Site for storehouse, Texas.....		60.00
Site for hospital, Marfa, Tex.....		75.00
Camp site, Marathon, Tex.....		180.00
Artillery range, Marietta, Ga.....	605.1 acres.....	82,293.60
Isolation Corral, Manila, P. I.....	5,313.42 square meters.....	159.42
Port of embarkation, Newport News, Va.....	250 acres.....	4,950.00
Camp site, New London, Conn.....		12.00
Camp site, Naco, Ariz.....	10 acres.....	12.00
Target range, Nogales, Ariz.....		240.00
Mobilization camp, New Orleans, La.....		12.00
Target range, Nogales, Ariz.....	160 acres.....	240.00
Cantonment site, Nogales, Ariz.....		240.00
Do.....		1,000.00
Do.....		420.00
Do.....		480.00
Do.....		600.00
Camp grounds, Nogales, Ariz.....		600.00
Target range, Nogales, Ariz.....		300.00
Cantonment, Newport News, Va.....	309 acres.....	4,587.96
Port of embarkation purposes, Nogales, Ariz.....	97,000 square feet.....	1,027.92
Animal embarkation depot, Newport News, Va.....	8½ acres.....	127.80
Newport News, Va.....		189.96
Camp site, Nogales, Ariz.....		1,020.00
Cantonment site, Nogales, Ariz.....		1,200.00
Do.....	Lots 114 and 115.....	12.00
Target range, Nogales, Ariz.....		240.00
Newport News, Va.....	5½ acres.....	1,857.00
Maneuver, tactical, and training purposes, Onondaga County, N. Y.....		360.00
Camp site, Pharr, Tex.....	6 acres.....	252.00
Camp site, Portland, Tex.....		11.00
Camp site, Presidio, Tex.....		540.00
Camping and grounds, Plattsburg Barracks, N. Y.....	10 acres.....	150.00
Camp site, Progreso, Tex.....		1,200.00
Quarters, corral, and camp site, Polvo, Tex.....		96.00
Cantonment site, Rockford, Ill.....	2,249 acres.....	44,980.00
Camp site, Ruidosa, Tex.....		90.00
Do.....		90.00
Camp site, Poncha, Tex.....		60.00
Right of way, San Benito, Tex.....		5.00
Do.....		3.00
Camp site, Shirley, Mass.....	1 acre.....	1.50
Camp site, Santa Helena, Tex.....		1.00
Drill and maneuver ground, San Antonio, Tex.....	239 acres.....	1,200.00
Camp site, Beanca, Tex.....		300.00
Camp site, San Diego, Cal.....		1.00
Camp site, San Benito, Tex.....		60.00
Camp site, San Pedro, Tex.....	5 acres.....	300.00
Camp, Suffolk County, Long Island, N. Y.....	1,000 acres.....	2,078.04
Camp grounds, St. Asaph, Va.....	10 acres.....	525.00
Do.....	48 acres.....	3,000.00
Camp site, Shirley, Mass.....	14 acres.....	35.00
Do.....	43 acres.....	107.50
Do.....	34 acres.....	51.00
Do.....	19½ acres.....	30.00
Do.....	24 acres.....	36.00
Do.....	69 acres.....	180.00
Hospital site and camp, San Antonio, Tex.....	103 acres.....	6,000.00
Camp site, Shirley, Mass.....	90 acres.....	210.00
Do.....	30 acres.....	350.00
Mobilization camp, Salem, N. H.....	450 acres.....	2,500.00
Camp site, Shirley, Mass.....	105 acres.....	500.00
Do.....	64 acres.....	460.00
Camp site, Shocks Mills, Pa.....	7,500 square feet.....	60.00
Camp site and drill ground, San Bernardino, Ariz.....		1.00
Camp site, Sierra Blanca, Tex.....		480.00
Camp site, Suffolk County, N. Y.....	1,115 acres.....	1,172.67
Do.....	800 acres.....	1.00
Camp site, Shirley, Mass.....	81 acres.....	450.00
Drill and maneuver grounds, San Antonio, Tex.....	160 acres.....	1,200.00
Camp site, San Benito, Tex.....	2 acres.....	12.00
Do.....		60.00
Drill and maneuver grounds, San Antonio, Tex.....	172.16 acres.....	1,238.40
Do.....	116 acres.....	1,200.00
Camp site, Camp Lecate, Cal.....	70 acres.....	480.00

¹ For time rented.

² For time occupied

³ For entire time.

Camp sites.—Rental of land for camps and other purposes, where located, area, and rental rate—Continued.

Where located.	Area.	Rental rate per annum.
Camp site, Valentine, Tex.....		\$120.00
Do.....		300.00
Target range, Vancouver, Wash.....	274.21 acres.....	3,000.00
Camp site, Waco, Tex.....	37.04 acres.....	185.16
Do.....	120 acres.....	600.00
Drill and instruction grounds, Washington, D. C.....	30 acres.....	1,500.00
Camp site, Winchester, Ky.....		240.00
Camp site, West Plattsburg, N. Y.....	6 acres.....	15.00
Camp site, Waco, Tex.....	1,166.75 acres.....	5,833.68
Camp site, Worcester, Mass.....	20 acres.....	12.00
Camp site, Waco, Tex.....	40.20 acres.....	203.52
Drill and instruction grounds, Washington, D. C.....	30 acres.....	1,500.00
Camp site, Yaphank, N. Y.....	8,400 acres.....	1.00
Camp site, Ysleta, Tex., west.....	Lots 1, 2, 3, 4, 5, 6, 7, and 8.....	120.00
Camp site, Yuma, Ariz.....	Block 87.....	360.00
Camp site, Zapata, Tex.....	9 acres.....	120.00
Camp site, Yuma, Ariz.....		2,400.00
Camp site, Yaphank, L. I., N. Y.....	1,000 acres.....	1.00
Camp ground, Youngstown, N. Y.....	11 acres.....	480.00
Total.....		726,049.80

¹ For entire time.

Report of temporary construction of storehouses authorized.

Where authorized.	Size of building.	Kind of building.	Cost.	Owned or leased land.
Washington Barracks.....	36 by 300 feet each..	3 portable storehouses.....	\$34,000	Leased.
Fort Worden, Wash.....	20 by 98 feet.....	1 temporary storehouse, conforming with standard plans for mobilization camps.	730	Owned.
St. Louis, Mo.....	60 by 3,608 feet each..	2 temporary storehouses.....	30,000	Do.
Jeffersonville Depot.....	45 by 224 feet.....	1 temporary storehouse, 1 story high.	17,500	Do.
Omaha Depot.....		1 temporary storehouse.....	5,300	Do.
Fort Ogelthorpe, Ga.....	60 by 252 feet.....	do.....	12,731	Do.
Jeffersonville Depot.....	45 by 300 feet.....	2 temporary storehouses.....	32,000	Do.
Governors Island, N. Y.....		Temporary storehouses.....	909,500	Do.
Fort Mason, Cal.....		2 temporary storehouses.....	33,186	Do.
Fort Baldwin, Me.....		1 temporary storehouse.....	950	Do.
Chicago, Ill.....	100 by 250 feet.....	do.....	15,000	Leased.
Fort Hamilton, N. Y.....		do.....	4,326	Owned.
St. Louis, Mo.....		Temporary storehouses.....	115,000	Do.
Total.....			1,210,223	
Jeffersonville Depot.....		Temporary storehouse, wood frames and sheet-iron sides.	380,000	Leased.
Total.....			1,590,223	

NOTE.—Buildings at Jeffersonville Depot to be as follows: One story high, 45 feet wide, 224 feet long, ceiling 14 feet high. Trussed room in one span. No interior posts. Floor truck height, 3 feet 9 inches above road. Windows alongside and ends of building 3 feet from floor of height to 1 foot below ceiling. Concrete pier foundation. Exterior walls of wood sheathing, covered with tar-felt paper, and then covered with corrugated iron. Two thicknesses of flooring with deadening paper between. Roof of Ready composition roofing. Ceiling and inside walls sealed with tongued and grooved flooring. Ventilation shafts from ceiling to roofs. Shipping and receiving doors and platforms. Steam heating and electric wiring. Estimated cost, \$17,500.

Gen. LITTELL. At Camp Shelby the amount of acreage is 3,275 acres, and it is rented at a dollar a year. That is at Hattiesburg, Miss.

Mr. LUNN. The rental is a dollar a year for all of it?

Gen. LITTELL. Yes, sir.

Mr. SHALLENBERGER. That is practically a donation.

Gen. LITTELL. Yes, sir; that is not the only other one; there are six of the same kind. There is one at Greenville, S. C.

(Notes concerning contributions herewith.)

STATEMENT SHOWING CONTRIBUTIONS BY INDIVIDUALS AND THE PUBLIC AS AN
INDUCEMENT FOR THE LOCATION OF CANTONMENTS AND CAMPS AS NOW
LOCATED.

NORTHEASTERN DEPARTMENT.

No inducements offered.

EASTERN DEPARTMENT—CAMP UPTON, YAPHANK, LONG ISLAND.

Clarence G. T. Smith donated 800 acres and Young & Metzner 8,400 acres at an annual rental of \$1.

WESTERN DEPARTMENT—CAMP LEWIS, AMERICAN LAKE, WASH.

On October 16, 1917, the ways and means committee for securing an Army maneuvering site, consisting of 20 representative citizens of Tacoma, Wash., offered the United States Government 70,000 acres located in the vicinity of American Lake, Wash., on the condition that approximately a division of troops should be permanently stationed thereon, this land to be acquired by the county of Pierce, Wash., through condemnation proceedings, and payment to be made thereafter from the proceeds of the sale of bonds approximating \$2,000,000. The county of Pierce, Wash., conveyed this property to the Government. In case the United States ceases to maintain a permanent mobilization, training, and supply station, the property would revert back to the county of Pierce, Wash.

CAMP KEARNEY, LINDA VISTA, CAL.

On May 21, 1917, the city of San Diego offered a tract of land of 8,000 acres in the vicinity of Linda Vista, Cal., rent free for a period of five years and further agreed to provide, without cost to the Federal Government, necessary connections for water, gas, and electricity and railroad connection. The city of San Diego further offered to construct and maintain the necessary highways to the cantonment. In addition to the 8,000 acres they also offered to provide a site for an artillery range under the condition that the Government locate a permanent division cantonment.

CAMP FREMONT, PALO ALTO, CAL.

San Francisco Chamber of Commerce and citizens agreed to donate free of rent for one year, 780 acres of land for cantonment buildings, and 6,300 acres adjacent to camp for maneuvering purposes. They also secured free rent on 20,000 additional acres for maneuvering purposes for the period of the war.

The annual rental for the 780 acres after the first year is about \$9,000. The annual rental on the 6,300 acres after the first year is about \$31,000.

They raised \$50,000 for the construction of 6 inch out fall sewers.

They raised \$85,000 in a fund to be used to compensate individual owners for damages to improvements, removed or possible damages to be incurred.

Spring Valley Water Co., laid four miles of 14-inch water main, capable of supplying daily not less than 2,000,000 gallons of water.

Pacific Gas & Electric Co. installed 35 miles of 8-inch 80-pound pressure main to supply gas.

CENTRAL DEPARTMENT—CAMP CUSTER, BATTLE CREEK, MICH.

No land contributed direct to Government. Battle Creek Chamber of Commerce had undertaken to give blanket lease on entire cantonment site and rifle range at \$15 per acre rental fiscal \$10 second year. They make all arrangements with individual owners. Savings on rentals to be refunded to United States.

CAMP DODGE, DES MOINES, IOWA.

No land contributed. Greater Des Moines committee furnished blanket lease method similar to Camp Custer. Annual rental approximately \$10 per acre. unexpended money to be refunded.

CAMP SHERMAN, CHILlicothe, OHIO.

No land contributed. Chillicothe War Council, by Col. Richard Enderlin, furnishes blanket lease on original cantonment site at \$15 rental and \$15 crop damage per acre. War Council is paying unknown amount in excess these rates.

CAMP GRANT, ROCKFORD, ILL.

No land contributed. Rockford Chamber of Commerce, by Charles A. Dickinson furnishes blanket lease entire cantonment, rifle range, and artillery range at \$20 rental per acre. No refund. Government pays actual damage of all kind in addition.

CAMP ZACHARY TAYLOR, LOUISVILLE, KY.

National Camp Land Co., organized by citizens of Louisville, furnishes blanket lease of original cantonment. No rental first two years. Government to pay crop damages \$40,000 first year, other actual damages payable relinquishment of cantonment. Annual rental after second year \$24,000, to include fifth year. Two additions necessary to complete origination camp site furnished by National Camp Land Co., as follows: Two hundred acres used for hospital, rental sixty six hundred first year, eighty-eight hundred each succeeding year with damages \$25,000 first year and soil and some other damages in additional. Thirteen acres rental, \$270 annual rental; damages, \$3,300 first year and actual damages thereafter. Rifle range, 800 acres; annual rental, \$3,000; crop damages, approximately \$25,000. Rifle and artillery ranges not specified herein are being leased by this office direct.

SOUTHEASTERN DEPARTMENT—CAMP M'CLELLAN, ANNISTON, ALA.

Bureau of Militia Affairs handled and purchased 15,000 acres, present camp location; no inducements.

CAMP BEAUREGARD, ALEXANDRIA, LA.

Three thousand acres leased at \$1 per annum, expiring June 30, 1922.

CAMP GORDON, ATLANTA, GA.

No land; city agreed to assume amount of last year a crop on which lease was secured prior to June 3.

CAMP GREENE, CHARLOTTE, N. C.

Chamber of Commerce leased two tracts of 2,100 acres, expiring June 30, 1921, at \$1 per annum, city agreed to pay crop damages.

CAMP SEVIER, GREENVILLE, S. C.

Two tracts of 1,970 acres leased to June 30, 1920, at \$2 per annum; chamber of commerce agrees to construct public highway from Greenville to camp.

CAMP SHELBY, HATTIESBURG, MISS.

Commercial club tendered free an area of 5½ square miles. Lease pending on 3,260 acres, expiring June 30, 1922, at \$1 per annum.

CAMP JACKSON, COLUMBIA, S. C.

City deeded in fee simple 1,192 acres.

CAMP PIKE, LITTLE ROCK, ARK.

Certain responsible citizens agree to convey, free of incumbrance and as a gift, title in fee simple, 34 acres in Pulaski County, Ark., acceptance recommended by Judge Advocate General.

CAMP WHEELER, MACON, GA.

City agrees to keep roads to camp in good condition. Chamber of commerce agreed to lease 3 tracts of 2,360 acres, expiring June 30, 1922, at \$3 per annum. Board of county commissioners, Bibb County, agree to construct main line sewers from camp to suitable outlets, capacity 1,000,000 gallons per day, cost thirty-seven and seven dollars per line.

CAMP WADSWORTH, SPARTANSBURG, S. C.

City agrees to lease 1,354 and 1,500, expiring June 30, 1922, at \$1 per annum, also agrees to pay crop damages on tracts aggregating 1,178 acres.

CAMP SHERIDAN, MONTGOMERY, ALA.

City leased 1,750 acres, expiring June 30, 1922.

CAMP HANCOCK, AUGUSTA, GA.

Board of commerce leased 1,450 acres, expiring June 30, 1922, at \$1 per annum.

SOUTHWESTERN DEPARTMENT—CAMP TRAVIS, SAN ANTONIO, TEX.

No inducements were offered by the city of San Antonio in the way of lands or other concessions. The only concession made was that the city administration, county administration, and community would render hearty and full cooperation with Army officers in locating and conducting such a national cantonment. The city and public service companies have expended approximately \$100,000 in providing utility facilities for Camp Travis, Tex.

CAMP LOGAN, HOUSTON, TEX.

Community gave no land. They agreed to furnish water at cost and build certain connecting roads and obtain certain lands and public utilities at reasonable rates and carry out War Department requirements of policing the city.

CAMP CODY, DEMING, N. MEX.

Following telegram from Gen. Blocksom of January 24: "Rental January 21; camp site comprises 1,800 acres. Of this land 36 acres was bought by Deming Chamber of Commerce, price \$5,600, and leased remainder. Leases from 13th July, 1917, to date have cost chamber of commerce \$4,000 and are now costing \$800 monthly. Target range comprises 11,500 acres leased last November 1 for \$4,000 monthly by chamber of commerce. These leases will continue in force as long as camp remains. The chamber of commerce say they made no promise to pay for leases when Gen. Green's board located the camp site, but as constructing quartermaster and other officials thought the land should be furnished free, as there was competition at other places for the camp site, chamber of commerce decided the land should be given to the Government at nominal lease of \$1 each for the two sites. My opinion is that Government should pay all this, although the chamber of commerce does not ask it." In addition to this telegram, chamber of commerce and principal business men guaranteed that prices of commodities, rents, and other necessities to the military personnel should not be raised. The city and county authorities promised hearty cooperation with the military authorities in regulating saloons and prostitution.

CAMP MACARTHUR, WACO, TEX.

Land was furnished at rent of \$5 per acre by chamber of commerce. Following telegram from Gen. McGachlin, January 22: "Rental 21st; Chamber of Commerce of Waco agreed to extend to camp adequate sewerage and water system and provide not less than 1,600,000 gallons daily at cost not exceeding 6 cents per 1,000; electric street car service at 5-cent fare efficient; local and long distance telephone service; electric lights and power; local railway spur and switches; place river-bathing facilities at disposal of camp; to lease to the Government suitable tracts at satisfactory prices; police to cooperate with military authorities. To enforce laws regarding intoxicants to carry out desires of Secretary of War to console social evil. Every above agreement fully observed. Some of land leased by chamber of commerce and sub-

leased to Government; cost is more than Government pays, but none less their lease covers yearly. Government lease is terminable monthly. No land contributed, but 65 acres acquired for use without rental should Government want it; this is not used by Government. Social evil apparently very effectively handled; promise regarding intoxicants exceeded by city going dry; not only have police been effectively co-operating but county authorities also. Chamber of commerce also agreed to fulfill every verbal offer made to board of officers which located camps, of which it is believed Col. Laubach, now at Camp Travis, was a member. Earnest, faithful, and successful efforts have been made to carry out agreement, and subjects not originally covered have been most satisfactorily handled in the same spirit."

CAMP DONIPHAN, FORT SILL, OKLA.

The city of Lawton adopted resolutions to build 24-inch pipe line and to enter into a contract to deliver to the War Department at Fort Sill the full capacity of the proposed 24-inch pipe line, delivering approximately 8,000,000 gallons per day. Following telegram from Gen. Wright, January 23, "Water concessions only inducement any kind known by this office as being offered by citizens of this vicinity for location of this camp site."

CAMP BOWIE, FORT WORTH, TEX.

Site was donated by chamber of commerce, also maneuver ground and rifle and artillery ranges. Water was to be furnished at cost and not to exceed 6 cents per thousand gallons; also to allow free use of water from Lakeworth or artesian wells in the vicinity if they desired to use it. Sewer line was to be extended to camp. They proposed hearty cooperation in regulating vice. Report of all correspondence selection of Army camp sites at Fort Worth going into detail is furnished by mail this date. The original and copies of the board of officers appointed to investigate the sites for cantonments should be on file in The Adjutant General's Office, Washington, D. C. The board which investigated and selected all the camp sites except Camp Cody, Deming, N. Mex., made the following statement: "At all the places recommended certain more or less definite offers and agreements were made by the responsible authorities as to furnishing camp and maneuver sites, water, fuel, light, and steam and electric road facilities; those submitted in writing accompany the original copy of the board of officers."

Mr. LUNN. Would you consider that as a donation?

Gen. LITTELL. Practically so.

Mr. LUNN. I am glad to know that there was more than one.

Gen. LITTELL. There were six of them.

Mr. LUNN. I do not mean to infer that everyone would give their land for this purpose, because that is impossible; there are cases where they have to have rental.

Gen. LITTELL. The price per acre at Yaphank, you will notice, was 88 cents, but the cost of clearing that site brings the cost up to \$200 an acre.

Mr. LUNN. That was very costly, then.

Gen. LITTELL. About \$200 an acre.

Mr. GARRETT. What was there on that site that had to be cleared off?

Maj. MARSHALL. There was a second growth of timber, and a tremendous lot of oak stumps.

Gen. LITTELL. It had been originally an oak forest, and that had been cut down, and there was a scrub growth there, and when they cut away the scrub they found these big stumps, and they had to be cleared out.

Mr. LUNN. What did it cost at Camp Shelby to prepare the ground for the camp?

Gen. LITTELL. To clear it?

Mr. LUNN. Yes, to put it in shape. I would like to have a figure in comparison with the cost for clearing the site at Yaphank. What did the camp at Shelby cost?

Gen. LITTELL. I will have to look up these figures and put them in the record.

Mr. FIELDS. May I suggest that you put in the hearing the cost of preparing each camp site for the buildings?

Mr. LUNN. That is, the ground work, preparing the surface of the ground for the buildings.

Gen. LITTELL. I will do that. You see, in any unusual case, of course, the ground on which any building is to be erected has to be cleared, and that usually does not amount to very much. You are referring to the general clearing of the ground, any unusual clearing?

Mr. LUNN. Yes.

Mr. LUNN. I want to ask some more questions about the Long Island camp. You say it cost \$200 an acre to clear it. Was there any special reason why this camp was better than anything else available, any particular reason why it should have been chosen?

Gen. LITTELL. I do not think I ought to be asked that question, because we did not select the camp site.

Mr. LUNN. Who did select that camp site, who was the commanding general of that department?

Gen. LITTELL. It was the commanding general of the Department of the East. Gen. Bell was the commanding general at that time.

Mr. SHALLENBERGER. General, has your department any information, or can you inform us why these camps have not all been located on Government reservations, thus avoiding the expense for rentals?

Gen. LITTELL. Most of the Government reservations are not big enough. Very few of them are big enough. Then it would also——

Mr. SHALLENBERGER (interposing). Result in congestion?

Gen. LITTELL. It would not comply with the desire to get as near the centers of the draft as possible.

Mr. SHALLENBERGER. Was that considered to be essential?

Gen. LITTELL. Yes, sir. The scheme was to locate one of the National Army cantonments in each draft area containing a certain number of men. That is one reason why they picked out Yaphank. That district for a certain number of men to be called out under the draft included New York City and Long Island. They could not locate a camp in New York City, and they had to go to Long Island.

Mr. SHALLENBERGER. Was that for military reasons?

Gen. LITTELL. I suppose it was for convenience in sending the draft men to the cantonments so they would not have to travel too far.

Mr. GARRETT. Does not the Government have to pay for transporting all of these men to the camps?

Gen. LITTELL. Yes, sir.

Mr. ANTHONY. Have you any records to show what were the original recommendations of these boards of officers selected by the department commanders in reference to these sites, what those recommendations were, and how many of those recommendations were afterwards changed, that is, the recommendations of the boards of officers?

Gen. LITTELL. No, sir. I do not know where those reports are. They were all sent to and handled by an officer who was on duty with the Chief of Staff.

Mr. ANTHONY. It is a fact, is it not, that in some instances the recommendations of these boards of officers appointed for the purpose of selecting a camp site were not followed?

Gen. LITTELL. I do not know.

Mr. ANTHONY. Who would know.

Gen. LITTELL. The Chief of Staff. They were handled in the office of the Chief of Staff. In several cases there was a question—that is, a camp site would be approved by the department commander, and then the recommendation would be made to the Secretary of War to have that changed, and he would investigate, and in a couple of instances, in the case of this particular site at Yaphank, that was delayed quite a little, while it was being investigated, and then it was finally approved, and the same was true in reference to another one of the sites, where we were held up for a week, after we had been working on that for a week.

Mr. GORDON. General, you say that estimates were prepared for each of these cantonments?

Gen. LITTELL. Not for each one; no, sir. We made our original estimates for cantonment construction to house a million men.

Mr. GORDON. These cantonments were then constructed in accordance with the plans you prepared, were they?

Gen. LITTELL. As I stated at the time, we were told to make that estimate. We did not know whether it was for a national training Army, or whether it was for war, or what it was for.

Mr. GORDON. It would not make any difference, would it?

Gen. LITTELL. Or whether it was for use on the Texas border. We based our estimate on the standard plans which we had for cantonments, which were merely made to take the place of tents. On the Texas border it was found that in some cases they had to renew their tentage at least three times a year, and that made it very expensive. Therefore it was decided that it would be better to put them in cantonments, and so we designed certain buildings to take the place of the tents, and they are just simple, perfectly plain long buildings, with the cracks covered up by battens.

Mr. GORDON. Did you prepare the plans and estimate for these cantonments that were actually constructed?

Gen. LITTELL. We prepared the plans, and we have from time to time prepared estimates to construct these cantonments in accordance with the plans designed, but of course putting all these cantonments in places where it was going to be cold, and where men were going to stay a long time, it was necessary to get a different kind of building from the ordinary frontier cantonment.

Mr. GORDON. You did design different kinds of buildings?

Gen. LITTELL. Yes, sir.

Mr. GORDON. I want to know how the contract for these cantonments compared with the estimates which you made as to the cost of construction.

Gen. LITTELL. How that cost compared with our estimates?

Mr. GORDON. Yes.

Gen. LITTELL. The cost in every case was considerably larger.

Mr. GORDON. How much larger?

Gen. LITTELL. In some cases at least 25 or 30 per cent.

Mr. GORDON. Could you put into the record the estimated cost for each of the cantonments with the location of the cantonments and the actual cost of construction to the Government?

Gen. LITTELL. Yes, sir.

Mr. GORDON. Will you do that?

Gen. LITTELL. Yes, sir. I have a table showing the actual cost. Of course it must be remembered that when we started in and made our plans for all of these cantonments that was based on certain costs, and we got the best information we could get at the time as to the kinds of organizations and all that sort of thing, and the utilities they would need. Many things have been changed since that time, and many buildings have had to be added, and at least 25 per cent more has been added to the camps with all sorts of things.

(The tables referred to are as follows:)

NATIONAL ARMY CANTONMENTS—NATIONAL GUARD CAMPS.

Comparison of total estimates of cost, dated Mar. 13, 1917, May 26, 1917, and Aug. 9, 1917, with the total estimated cost prepared Jan. 1, 1918.

	National Army can- tonments.	National Guard camps.	Total.
Estimate of Mar. 13, 1917.....			\$78,365,799
Estimate of May 26, 1917.....			192,393,200
Estimate of Aug. 9, 1917.....	\$102,088,525	\$23,527,000	125,615,525
Estimate of Jan. 1, 1918.....	140,726,473	38,375,272	179,101,745

Summary of estimates for cantonments for the National Guard and the National Army.

Appropriation.	Estimate Mar. 13, 1917 (1,061,270 men).		Estimate May 26, 1917, canton- ment construction.		
	Per capita.	Amount.	Per capita.	Per division (32,347 men).	32 divisions and addi- tional units (1,103,496 men).
Barracks and quarters:					
Construction.....	\$42.00	\$44,573,340.00	\$61.98	\$1,997,500	\$63,920,000
Wall boarding.....			3.47	112,000	3,184,000
Screening and screen doors.....			2.54	82,000	2,807,680
Rental camp sites.....	2.00	2,122,540.00	.31	10,000	342,400
Rental recruiting stations.....	1.184	2,142,440.00			
Rental lodgings.....	.92				
Allow for contingencies, 10 per cent.....			6.83	220,150	7,537,936
Supplies, services, and transportation:					
Plumbing.....			7.75	250,000	8,560,000
Heating—					
Stoves.....			9.31	300,000	10,272,000
Steam.....					
Power plant.....			3.10	100,000	3,424,000
Electric lighting, interior.....			2.79	90,000	3,081,600
Exterior system in camp limits.....			.68	22,000	753,280
Water system.....	1.75	1,857,222.50	6.26	200,000	6,848,000
Sewer system.....			2.32	75,000	2,568,000
Maintenance water and sewer system.....	.175	185,722.25			
Sewage disposal.....			6.21	200,000	6,848,000
Laundry.....			6.33	204,000	6,984,960
Fire apparatus, including buildings.....			1.39	45,000	1,540,800
Garbage incinerating plant.....			.77	25,000	856,000
Ice and refrigerating plant.....			3.87	125,000	4,280,000
Bunks.....			4.18	135,000	4,522,400
Mattresses.....			5.43	175,000	5,992,000
Ranges.....			.62	20,000	684,800
Refrigerators.....			.62	20,000	684,800
Allow for contingencies, 10 per cent.....			6.17	198,600	6,800,064
Toilet paper.....	2.00	2,122,540.00			
Disposal garbage.....	3.00	3,183,810.00			
Purchase water.....	4.80	5,994,996.00			
Electric current.....	4.80	5,994,996.00			
Roads, walks, wharves, and drainage:					
Roads.....	5.00	5,306,350.00	5.43	175,000	5,992,000
Drainage.....			.93	30,000	1,027,200
Clearing.....			.62	20,000	684,800
Railroads.....			2.33	75,000	2,568,000
Maintenance roads.....	.50	530,635.00			
Allow for contingencies, 10 per cent.....			.93	30,000	1,027,200
Construction and repair of hospitals.....	2.10	2,228,667.00	18.92	652,500	20,880,000
Shooting galleries and ranges.....	2.00	2,122,540.00	2.26	78,000	2,496,000
Total.....	72.229	78,365,798.75	174.35	5,666,750	192,393,200

Summary of estimates for cantonments for the National Guard and the National Army—Continued.

Appropriation.	Other items.	Possible omissions and substitutions under estimate of May 26.	Amount of reductions.
Barracks and quarters: Screening and screen doors.....		Omission of fly screens except for kitchens.	\$2,739,200
Supplies, services, and transportation: Plumbing.....		Substitution of latrine trenches for water closets and urinals.	6,848,000
Heating— Stoves.....	}	{Omission of steam heat for barracks at northern cantonment. (C) Substitution of kerosene lamp for electric lighting when current is not obtainable from existing sources.	2,362,500
Steam.....			
Electric lighting, interior.....			3,834,880
Sewer system.....			1,712,000
Maintenance water and sewer system.....		(E) Reduced sewerage if water closets are omitted.	.....
Sewage disposal.....			3,766,400
Laundry.....		Omission of laundries.....	6,984,960
Ice and refrigerating plant.....		Omission of refrigerating and ice plants.	4,280,000
Toilet paper.....			2,122,540
Roads, walks, wharves, and drainage: Railroads.....		Reduction of railroad construction on assumption that railroad construction will build distribution tracks in cantonment at their own expense.	2,568,000
Construction and repair of hospitals.....		Reduction in size of hospital below estimates submitted by Medical Department. ¹	10,440,000
Total.....	2,122,540		45,533,000

¹ Estimate submitted by Medical Department.

National Army cantonments—Total estimated cost as of Aug. 9, 1917, compared with total cost estimated as of Jan. 1, 1918.

National Army cantonments.	Total cost as estimated Aug. 9, 1917.	Total cost as estimated Jan. 1, 1918.
American Lake, Wash., Camp Lewis.....	\$6,517,408	\$7,007,235
Annapolis Junction, Md., Camp Meade.....	5,873,258	10,500,000
Atlanta, Ga., Camp Gordon.....	5,800,653	7,483,002
Ayer, Mass., Camp Devens.....	6,835,223	9,727,145
Battle Creek, Mich., Camp Custer.....	6,520,528	8,700,000
Chillicothe, Ohio, Camp Sherman.....	6,125,358	9,620,075
Columbus, S. C., Camp Jackson.....	6,311,718	8,731,187
Des Moines, Iowa, Camp Dodge.....	7,000,873	6,815,519
Fort Riley, Kans., Camp Funston.....	7,002,223	8,799,535
Fort Sam Houston, Tex., Camp Travis.....	6,660,943	6,717,176
Little Rock, Ark., Camp Pike.....	5,826,088	9,015,565
Louisville, Ky, Camp Taylor.....	6,179,248	7,041,392
Petersburg, Va., Camp Lee.....	6,466,773	11,300,000
Rockford, Ill., Camp Grant.....	6,331,513	8,517,233
Wrightstown, N. J., Camp Dix.....	6,246,130	9,623,067
Yaphank, Long Island, Camp Upton.....	6,390,528	11,128,341
Total.....	102,088,525	140,726,473

National Guard camp—Total estimated cost as of Aug. 9, 1917, compared with total cost estimated as of Jan. 1, 1918.

National Guard camps.	Total cost as estimated Aug. 9, 1917.	Total cost as estimated Jan. 1, 1918.
Alexandria, La., Camp Beauregard.....	\$1,891,750	\$2,648,982
Anniston, Ala., Camp McClellan.....	3,144,750	3,195,452
Augusta, Ga., Camp Hancock.....	2,093,750	1,967,917
Charlotte, N. C., Camp Greene.....	2,878,750	3,196,641
Deming, N. Mex., Camp Cody.....	2,767,750	2,539,900
Fort Sill, Okla., Camp Doniphan.....	2,480,750	3,331,802
Fort Worth, Tex., Camp Bowie.....	2,445,750	2,305,402
Greenville, S. C., Camp Sevier.....	2,667,750	1,871,440
Hattiesburg, Miss., Camp Shelby.....	2,247,750	3,289,825
Houston, Tex., Camp Logan.....	2,002,750	1,963,058
Linda Vista, Cal., Camp Kearney.....	2,128,750	2,993,055
Macon, Ga., Camp Wheeler.....	2,088,750	2,008,907
Montgomery, Ala., Camp Sheridan.....	2,774,750	1,843,614
Palo Alto, Cal., Camp Fremont.....	2,019,750	1,988,729
Spartanburg, S. C., Camp Wadsworth.....	3,234,750	2,106,473
Waco, Tex., Camp McArthur.....	2,375,750	1,974,275
Total.....	39,139,000	38,375,272
Deduct for tentage instead of lumber construction.....	15,612,000	
	23,527,000	

Estimate of cost of cantonment and camp construction work, Aug. 9, 1917.

Location	Name of camp.	Barracks and quarters.	Water and sewers.	Regular supplies.	Roads, walks, wharves, and drainage.	Shooting galleries and ranges.
NATIONAL ARMY CAMPS.						
American Lake, Wash.....	Camp Lewis.....	\$3,121,300	\$1,309,643	\$731,625	\$406,500	\$125,000
Annapolis Junction, Md.....	Camp Meade.....	2,888,700	1,122,833	738,725	313,500	125,000
Atlanta, Ga.....	Camp Gordon.....	2,914,900	1,132,228	667,725	494,500	125,000
Ayer, Mass.....	Camp Devens.....	3,047,200	1,129,698	1,427,425	397,500	125,000
Battle Creek, Mich.....	Camp Custer.....	2,555,900	1,127,408	1,364,325	347,500	125,000
Chillicothe, Ohio.....	Camp Sherman.....	2,865,800	1,098,033	697,725	331,500	125,000
Columbia, S. C.....	Camp Jackson.....	3,007,300	1,149,993	922,525	390,500	125,000
Des Moines, Iowa.....	Camp Dodge.....	3,340,100	1,317,348	1,212,525	430,500	125,000
Fort Riley, Kans.....	Camp Funston.....	3,390,500	1,231,113	1,588,125	335,185	125,000
Fort Sam Houston, Tex.....	Camp Travis.....	3,189,800	1,264,818	958,925	393,500	125,000
Little Rock, Ark.....	Camp Pike.....	2,880,500	1,202,583	654,125	406,400	125,000
Louisville, Ky.....	Camp Taylor.....	3,068,000	1,209,523	888,825	347,500	125,000
Petersburg, Va.....	Camp Lee.....	3,306,100	1,253,348	725,425	321,500	125,000
Rockford, Ill.....	Camp Grant.....	2,898,300	1,108,188	1,145,125	353,500	125,000
Wrightstown, N. J.....	Camp Dix.....	2,935,200	1,351,805	779,725	347,500	125,000
Yaphank, Long Island, N. Y.....	Camp Upton.....	3,028,500	1,140,463	959,125	412,500	132,540
Total.....		48,800,000	19,150,000	15,590,000	5,809,985	2,014,540
NATIONAL GUARD.						
Augusta, Ga.....	Camp Hancock.....	500,750	269,000	66,000	175,000	130,000
Deming, N. Mex.....	Camp Cody.....	473,750	270,000	60,000	175,000	125,000
Montgomery, Ala.....	Camp Sheridan.....	483,750	277,000	63,000	175,000	125,000
Spartanburg, S. C.....	Camp Wadsworth.....	583,750	350,000	80,000	175,000	135,000
Waco, Tex.....	Camp MacArthur.....	481,750	262,000	80,000	175,000	125,000
Anniston, Ala.....	Camp McClellan.....	570,750	338,000	77,000	175,000	135,000
Charlotte, N. C.....	Camp Greene.....	528,750	310,000	71,000	175,000	135,000
Houston, Tex.....	Camp Logan.....	408,750	228,000	53,000	175,000	125,000
Greenville, S. C.....	Camp Sevier.....	438,750	243,000	55,000	175,000	125,000
Palo Alto, Cal.....	Camp Fremont.....	398,750	215,000	49,000	175,000	125,000
Fort Sill, Okla.....	Camp Doniphan.....	481,750	275,000	63,000	175,000	50,000
Fort Worth, Tex.....	Camp Bowie.....	461,750	261,000	59,000	175,000	135,000
Linda Vista, Cal.....	Camp Kearney.....	414,750	228,000	53,000	175,000	125,000
Macon, Ga.....	Camp Wheeler.....	408,750	222,000	51,000	175,000	135,000
Hattiesburg, Miss.....	Camp Shelby.....	430,750	240,000	55,000	175,000	135,000
Alexandria, La.....	Camp Beauregard.....	378,750	200,000	45,000	175,000	135,000
Total.....		7,420,000	4,208,000	960,000	2,800,000	2,000,000

Estimate of cost of cantonment and camp construction work, Aug. 9, 1917—Continued.

Location.	Name of camp.	Construction and repair of hospitals.	Clothing and equipage.	Total.	Number of personnel.	Cost per capita.
NATIONAL ARMY CAMPS.						
American Lake, Wash....	Camp Lewis.....	\$549,400	\$194,000	\$6,517,468	45,949	\$142
Annapolis Junction, Md.	Camp Meade.....	549,400	157,000	5,873,258	37,191	158
Atlanta, Ga.....	Camp Gordon.....	389,400	165,000	5,800,653	39,975	146
Ayer, Mass.....	Camp Devens.....	549,400	159,000	6,835,223	37,517	182
Battle Creek, Mich.....	Camp Custer.....	549,400	151,000	6,520,528	35,819	182
Chillicothe, Ohio.....	Camp Sherman.....	549,400	157,000	6,125,358	37,416	164
Columbia, S. C.....	Camp Jackson.....	549,400	167,000	6,311,718	40,301	157
Des Moines, Iowa.....	Camp Dodge.....	389,400	186,000	7,000,873	44,356	158
Fort Riley, Kans.....	Camp Funston.....	143,000	189,000	7,002,223	45,787	153
Fort Sam Houston, Tex.	Camp Travis.....	549,400	180,000	6,660,943	42,759	156
Little Rock, Ark.....	Camp Pike.....	389,400	162,000	5,826,088	38,603	151
Louisville, Ky.....	Camp Taylor.....	549,400	173,000	6,179,248	41,387	149
Petersburg, Va.....	Camp Lee.....	549,400	186,000	6,466,773	44,232	146
Rockford, Ill.....	Camp Grant.....	549,400	154,000	6,331,513	37,191	170
Wrightstown, N. J.....	Camp Dix.....	549,400	157,000	6,246,130	37,292	167
Yanhook, Long Island, N. Y.....	Camp Upton.....	549,400	163,000	6,390,528	38,765	165
Total.....		7,904,000	2,700,000	102,068,525	644,540	156
NATIONAL GUARD.						
Augusta, Ga.....	Camp Hancock....	432,000	1,101,000	2,693,750	27,987	96
Deming, N. Mex.....	Camp Cody.....	396,000	1,008,000	2,507,750	25,648	98
Montgomery, A. a.....	Camp Sheridan...	410,000	1,041,000	2,574,750	26,558	97
Spartansburg, S. C.....	Camp Wadsworth...	540,000	1,371,000	3,234,750	34,913	97
Waco, Tex.....	Camp MacArthur...	383,000	969,000	2,435,750	24,656	99
Anniston, Ala.....	Camp McClellan..	523,000	1,376,000	3,144,750	33,787	93
Charlotte, N. C.....	Camp Greene.....	468,000	1,191,000	2,878,750	30,319	95
Houston, Tex.....	Camp Logan.....	311,000	797,000	2,097,750	20,151	104
Greenville, S. C.....	Camp Sevier.....	347,000	885,000	2,666,750	22,558	101
Palo Alto, Cal.....	Camp Fremont....	298,000	759,000	2,019,750	19,336	104
Fort Sill, Okla.....	Camp Doniphan..	407,000	1,035,000	2,486,750	26,319	95
Fort Worth, Tex.....	Camp Bowie.....	387,000	977,000	2,445,750	24,689	100
Linda Vista, Cal.....	Camp Kearney....	320,000	813,000	2,128,750	20,726	108
Macon, Ga.....	Camp Wheeler....	310,000	789,000	2,088,750	20,030	104
Hattiesburg, Miss.....	Camp Shelby.....	342,000	870,000	2,247,750	22,075	102
Alexandria, La.....	Camp Beauregard..	270,000	690,000	1,891,750	17,509	108
Total.....		6,139,000	15,612,000	139,139,000	397,249	99

Location.	Barracks and quarters.	Water and sewers.	Regular supplies.	Roads, walks, wharves, and drainage.	Shooting galleries and ranges.
Regular Army.....	\$5,000,000	\$2,000,000	\$1,335,000	\$558,596	
Ice plant abroad.....			6,000,000		
Inglewood, N. J.....	8,500,000	2,039,500	3,300,000	1,400,000	
Newport News, Va.....	8,750,000	2,600,000	2,500,000	1,200,000	
Quartermaster reserve camp.....	4,700,000	300,000	250,000	200,000	
Storage at embarkation ports.....	3,000,000	3,000,000		1,000,000	
Additional cantonment port of embarkation.....	4,500,000	1,500,000	750,000	750,000	
Changing National Guard camps into cantonments.....	35,180,000	12,912,000	14,208,000	4,960,000	\$2,000,000
Grand total of all items.....	125,850,000	47,709,500	44,913,000	18,808,581	6,014,540
Total of funds available in act approved June 15, 1917, for cantonment construction.....	44,400,000	13,900,000	15,705,000	4,539,985	
Total amounts included in estimates now before Congress.....	79,233,000	431,338,000	30,890,000	13,830,000	6,014,540
Total.....	123,633,000	45,238,000	46,595,000	18,359,985	6,014,540
Additional amounts required to complete cantonments in accordance with above estimates.....	2,217,000	2,471,500		438,596	
Excess amount required.....			1,682,000		

¹ Without tentage. \$23,527,000.

² Included in this amount is \$58,596 for tracks, platforms, and driveways required at Fort Benjamin Harrison, Ind.

Estimate of cost of cantonment and camp construction work, Aug. 9, 1917—Continued.

Location.	Construction and repair of hospitals.	Clothing and equipage.	Barracks and quarters seacoast defenses.	Total.	Number of personnel.
Regular Army.....				¹ \$8,923,596	149,881
Coast Artillery.....			\$3,462,000	3,462,000	
Ice plant abroad.....				6,000,000	
Inglewood, N. J.....				15,239,500	
Newport News, Va.....				15,050,000	
Quartermaster reserve camp.....				5,450,000	
Storage at embarkation ports.....				7,000,000	
Additional cantonment port of embarkation.....				7,500,000	
Changing National Guard camps into cantonment.....	\$2,160,000	\$2,700,000		² 74,120,000	575,872
Field and base hospital.....	23,785,594			23,785,594	
Grand total of all items.....	42,988,594	5,400,000	3,462,000	295,146,215	1,767,542
Total funds available in act approved June 15, 1917, for cantonment construction.....	2,014,540	2,700,000		83,259,525	
Total amounts included in estimates now before Congress.....	35,865,594	2,700,000		200,871,134	
Total.....	38,880,134	5,400,000		284,130,659	
Additional amounts required to complete cantonments in accordance with above estimates.....	4,108,460		3,462,000	12,697,556	
Excess amount required.....				1,682,000	
Net amount required.....				11,015,556	

¹ Cost per capita, \$60.

² Cost per capita, \$170.

Total estimated cost of camp construction, National Guard camps, as of date given.

Location.	Name.	Date of estimate.	Barracks and quarters.	Supplies, services, and transportation.	Roads, walks, wharves, and drainage.
Augusta, Ga.....	Camp Hancock.....	Nov. 30	\$935,563	\$513,710	\$130,341
Deming, N. Mex.....	Camp Cody.....	Dec. 15	1,288,197	681,263	151,334
Montgomery, Ala.....	Camp Sheridan.....	Dec. 22	758,902	131,280	149,411
Spartanburg, S. C.....	Camp Wadsworth.....	Dec. 9	834,769	519,691	311,000
Waco, Tex.....	Camp MacArthur.....	Dec. 15	786,834	108,099	165,428
Anniston, Ala.....	Camp McClellan.....	Dec. 14	1,027,998	1,311,548	246,321
Charlotte, N. C.....	Camp Greene.....	Nov. 30	1,426,295	907,499	228,376
Houston, Tex.....	Camp Logan.....	Dec. 5	823,000	557,108	172,000
Greenville, S. C.....	Camp Sevier.....	Dec. 1	705,322	519,361	164,944
Palo Alto, Cal.....	Camp Fremont.....	do.....	959,527	522,917	90,232
Fort Sill, Okla.....	Camp Doniphan.....	Dec. 15	989,725	431,501	345,208
Fort Worth, Tex.....	Camp Bowie.....	Dec. 1	1,036,834	637,866	125,426
Linda Vista, Cal.....	Camp Kearney.....	Nov. 30	975,382	1,163,214	425,144
Macon, Ga.....	Camp Wheeler.....	Dec. 5	983,475	508,312	189,633
Hattiesburg, Miss.....	Camp Shelby.....	Dec. 1	995,685	921,385	623,265
Alexandria, La.....	Camp Beauregard.....	do.....	1,089,600	756,578	341,412
Total National Guard.....			15,617,108	10,997,342	3,859,123

Total estimated cost of camp construction, National Guard camps, as of date given—
Continued.

Location.	Name.	Shooting galleries and ranges.	Construction and repair of hospitals.	Total cost.	Number of personnel.	Cost per capita.
Augusta, Ga.....	Camp Hancock.....	\$119,000	\$349,957	\$2,048,571	27,152	\$75.45
Deming, N. Mex.....	Camp Cody.....	108,800	380,850	2,610,443	27,152	96.14
Montgomery, Ala.....	Camp Sheridan.....	112,200	361,282	1,913,056	27,152	70.46
Spartanburg, S. C.....	Camp Wadsworth.....	147,900	373,966	2,187,327	27,152	80.56
Waco, Tex.....	Camp MacArthur.....	105,500	408,516	1,974,375	27,152	72.73
Anniston, Ala.....	Camp McClellan.....	144,500	527,911	3,258,278	27,152	120.00
Charlotte, N. C.....	Camp Greene.....	129,200	555,423	3,246,793	27,152	119.58
Houston, Tex.....	Camp Logan.....	85,000	325,900	1,963,058	27,152	72.30
Greenville, S. C.....	Camp Sevier.....	95,200	386,613	1,871,440	27,152	68.92
Palo Alto, Cal.....	Camp Fremont.....	81,600	334,453	1,988,729	27,152	73.24
Fort Sill, Okla.....	Camp Doniphan.....	112,200	453,168	2,331,802	27,152	85.98
Fort Worth, Tex.....	Camp Bowie.....	105,400	397,876	2,305,402	27,152	84.90
Linda Vista, Cal.....	Camp Kearney.....	92,091	321,257	2,977,088	27,152	109.65
Marion, Ga.....	Camp Wheeler.....	94,850	359,037	2,135,337	27,152	78.64
Hattiesburg, Miss.....	Camp Shelby.....	163,500	581,990	3,289,825	30,762	106.94
Alexandria, La.....	Camp Beauregard.....	74,800	386,592	2,648,982	27,152	97.56
Total National Guard.....		1,771,741	6,504,791	38,751,506	438,042	88.33

NOTE.—The figures above given under appropriation "Shooting galleries and ranges" represent the latest data received from the various camps and any figures heretofore submitted thereunder are hereby modified accordingly.

Total estimated cost for cantonment construction, National Army cantonments.

Location.	Name.	Date of estimate.	Barracks and quarters.	Supplies, services, and transportation.	Roads, walks, wharves, and drainage.
American Lake, Wash.....	Camp Lewis.....	Dec. 10	\$3,497,968	\$2,501,064	\$338,096
Annapolis Junction, Md.....	Camp Meade.....	Dec. 31	5,033,510	4,151,110	865,121
Atlanta, Ga.....	Camp Gordon.....	Dec. 20	4,651,472	2,096,990	295,706
Ayer, Mass.....	Camp Devens.....	Nov. 12	4,537,431	3,731,718	680,315
Battle Creek, Mich.....	Camp Custer.....	Dec. 1	3,511,475	3,671,180	673,672
Chillicothe, Ohio.....	Camp Sherman.....	....do.....	4,920,300	3,339,795	506,000
Columbia, S. C.....	Camp Jackson.....	....do.....	4,407,462	3,016,970	491,463
Des Moines, Iowa.....	Camp Dodge.....	Dec. 8	3,415,469	2,391,360	518,690
Fort Riley, Kans.....	Camp Funston.....	Dec. 22	4,079,440	3,921,301	496,794
Fort Sam Houston, Tex.....	Camp Travis.....	Nov. 30	3,599,781	1,973,052	498,313
Little Rock, Ark.....	Camp Pike.....	Nov. 15	4,629,749	2,933,623	635,568
Louisville, Ky.....	Camp Taylor.....	Dec. 13	4,047,948	2,116,815	320,934
Petersburg, Va.....	Camp Lee.....	Dec. 31	6,959,280	2,956,685	414,301
Rockford, Ill.....	Camp Grant.....	Nov. 30	4,138,419	3,598,825	193,989
Wrightstown, N. J.....	Camp Dix.....	....do.....	4,817,630	3,330,475	343,962
Yaphank, L. I.....	Camp Upton.....	Nov. 15	5,023,161	4,276,051	763,308
Total National Army.....			71,213,495	50,067,017	8,036,271

Total estimated cost for cantonment construction, National Army cantonments—Con.

Location.	Name.	Shooting galleries and ranges.	Construction and repair of hospitals.	Military post exchange.	Total.	Number of personnel.	Cost per capita.
American Lake, Wash.	Camp Lewis.....	\$51,175.50	\$592,000	\$27,000	\$7,007,304	41,685	156.82
Annapolis Junction, Md.	Camp Meade.....	50,865.00	370,250	30,000	10,500,865	41,303	255.55
Atlanta, Ga.....	Camp Gordon.....	85,500.00	444,664	27,170	7,511,502	33,796	189.83
Ayer, Mass.....	Camp Devens.....	58,000.00	682,899	30,178	9,730,511	35,284	275.75
Battle Creek, Mich.	Camp Custer.....	52,004.00	784,960	27,000	8,700,300	31,055	285.55
Chillicothe, Ohio.....	Camp Sherman.....	50,000.00	795,846	58,325	9,670,075	39,363	251.87
Columbia, S. C.....	Camp Jackson.....	52,000.00	733,873	31,470	8,733,187	42,458	205.50
Des Moines, Iowa.....	Camp Dodge.....	50,000.00	413,000	27,000	6,815,519	40,526	168.17
Fort Riley, Kans.....	Camp Funston.....	50,000.00	252,000	(1)	8,799,535	41,564	211.71
Fort Sam Houston, Tex.	Camp Travis.....	50,000.00	596,000	(1)	6,717,176	41,833	162.43
Little Rock, Ark.....	Camp Pike.....	50,000.00	780,625	27,000	9,065,565	42,317	214.08
Louisville, Ky.....	Camp Taylor.....	75,000.00	459,864	31,684	7,055,727	43,139	160.57
Petersburg, Va.....	Camp Lee.....	50,000.00	891,598	42,258	11,314,123	45,512	278.00
Rockford, Ill.....	Camp Grant.....	40,000.00	535,472	10,537	8,517,212	41,309	210.18
Wrightstown, N. J.....	Camp Dix.....	111,100.00	839,000	27,000	9,559,167	41,309	231.41
Yaphank, L. I.....	Camp Upton.....	52,115.00	988,513	53,513	11,156,063	40,913	272.00
Total National Army.		927,759.50	10,159,333	453,115	140,726,473	651,766	216.61

¹ Constructed by camp quartermaster.

NOTE.—The figures above given under appropriation "Shooting galleries and ranges" represent the latest data received from the various camps and any figures heretofore submitted thereunder are hereby modified accordingly.

Summary of total estimated cost, miscellaneous construction.

	National Army cantonments.	National Guard camps.	Miscellaneous construction.	Total.
Barracks and quarters.....	\$71,213,495	\$15,617,108	\$20,003,622	\$106,834,225
Supplies, services, and transportation.....	50,067,017	10,997,312	17,396,227	78,460,596
Roads, walks, wharves, and drainage.....	8,036,271	3,850,523	1,383,363	13,270,157
Shooting galleries and ranges.....	797,241	1,308,507	.....	2,105,748
Construction and repair of hospital.....	10,159,333	6,504,791	15,070,255	31,734,379
Military post exchanges.....	453,115	.....	57,256	510,371
Barracks and quarters, seacoast defense.....	.....	.....	3,462,000	3,462,000
Total.....	140,726,472	38,375,272	63,892,853	242,994,600

Approximate total cost of National Army, National Guard, embarkation, and quartermaster training cantonments and camps as of Jan. 1, 1918.

National Army cantonments.....	\$140,726,473
National Guard camps.....	38,375,272
Embarkation camps.....	14,194,446
Quartermaster training camps.....	3,765,467
Machine-shop unit.....	531,473
School of fire.....	680,000
Total.....	198,273,131

Statement of approximate total cost, National Army cantonments, as of Jan. 1, 1918.

American Lake, Wash., Camp Lewis.....	\$7,077,235
Annapolis Junction, Md., Camp Meade.....	10,500,000
Atlanta, Ga., Camp Gordon.....	7,483,002
Ayer, Mass., Camp Devens.....	9,727,145
Battle Creek, Mich., Camp Custer.....	8,700,000
Chillicothe, Ohio, Camp Sherman.....	9,620,076
Columbia, S. C., Camp Jackson.....	8,731,187

Des Moines, Iowa, Camp Dodge.....	\$6, 815, 519
Fort Riley, Kans., Camp Funston.....	8, 799, 535
Fort Sam Houston, Tex., Camp Travis.....	6, 717, 176
Little Rock, Ark., Camp Pike.....	9, 015, 565
Louisville, Ky., Camp Taylor.....	7, 041, 392
Petersburg, Va., Camp Lee.....	11, 300, 000
Rockford, Ill., Camp Grant.....	8, 517, 233
Wrightstown, N. J., Camp Dix.....	9, 623, 067
Yaphank, L. I., Camp Upton.....	11, 128, 341
Total.....	140, 726, 473

Statement of approximate total cost, National Guard camps.

Alexandria, La., Camp Beauregard.....	\$2, 648, 982
Anniston, Ala., Camp McClellan.....	3, 195, 452
Augusta, Ga., Camp Hancock.....	1, 967, 817
Charlotte, N. C., Camp Greene.....	3, 196, 641
Deming, N. Mex., Camp Cody.....	2, 539, 900
Fort Sill, Okla., Camp Doniphan.....	3, 331, 802
Fort Worth, Tex., Camp Bowie.....	2, 305, 402
Greenville, S. C., Camp Sevier.....	1, 871, 440
Hattiesburg, Miss., Camp Shelby.....	3, 289, 825
Houston, Tex., Camp Logan.....	1, 963, 058
Linda Vista, Cal., Camp Kearney.....	2, 993, 055
Macon, Ga., Camp Wheeler.....	2, 098, 807
Montgomery, Ala., Camp Sheridan.....	1, 843, 614
Palo Alto, Cal., Camp Fremont.....	1, 988, 729
Spartanburg, S. C., Camp Wadsworth.....	2, 166, 473
Waco, Tex., Camp MacArthur.....	1, 974, 275
Total.....	38, 375, 272

Statement of approximate total cost embarkation camps, quartermaster training camps, machine-shop units, and school of fire.

Embarkation camps:

Newport News, Va., Camp Stewart.....	\$8, 049, 225
Tenafly, N. J., Camp Merritt.....	6, 145, 221

14, 194, 446

Quartermaster training camp, Jacksonville, Fla., Camp Johnston.....	3, 765, 467
Machine-shop unit, Washington, D. C., Camp Ordway.....	531, 473
School of fire, Fort Sill.....	680, 000

Mr. GORDON. Did you make an estimate for the cost of those additions?

Gen. LITTELL. Yes, sir; we have had several estimates in.

Mr. GORDON. Then you would be able to answer the question as to what the estimated cost in every case was, and what the actual cost was?

Gen. LITTELL. Yes, sir. Of course, in some cases we have, as you will note, a deficiency, because every few days there is something new that has to be furnished. In the beginning we had no idea that they would need quarters for the French and English officers and the noncommissioned officers.

Mr. GORDON. But in all cases you made estimates for those additions, did you not?

Gen. LITTELL. We did not, originally.

Mr. GORDON. I did not say originally. I say you did that before they were actually constructed; you made plans and estimates?

Gen. LITTELL. This is the way that happens. We make no original estimates for those things. The people on the spot write to The Adjutant General and state what they consider necessary.

For instance, they consider a building to house the foreign officers necessary. They state that they have not got room enough for the clerical office force for division headquarters and they need a new building for that purpose. They look to the people on the spot to furnish the bids, and they are sent to us and we make an estimate and send it back to the Secretary of War, who authorizes the construction of the buildings.

Mr. GORDON. Then you have estimates for all of the different structures?

Gen. LITTELL. We always make an estimate for buildings.

Mr. GORDON. I would like to have you put into the record the estimated cost and the actual cost of these various structures.

Gen. LITTELL. Of each of the structures?

Mr. GORDON. Of each of the camps.

Gen. LITTELL. Yes, sir. We have constructed over 26,000 buildings at the various camps and cantonments.

Mr. GORDON. I simply want the cost of each camp.

Gen. LITTELL. Yes, sir. I have a table giving the cost, and the other information we can put in another column.

Mr. GORDON. Put that in the record, if you please.

Mr. LUNN. There has been a great deal of criticism regarding the method of building the cantonments; that is, the cost plus plan, and a great many statements that may have been exaggerated, and I would like to have you state the method of granting these contracts, and whether in the case of a given cantonment you award a contract for the entire construction to one concern, what the contract was, and what the cost plus method involves. I think you have that.

Gen. LITTELL. Very unfortunately, it has gotten to be designated as a cost plus 10 per cent contract. There is no more reason why it should be called that than that it should be called a cost plus 6 per cent contract.

Mr. LUNN. As a matter of fact it is not a cost plus 10 per cent, but a cost plus various percentages?

Gen. LITTELL. Yes, sir; it is a sliding scale.

Mr. LUNN. It makes no difference how big the contract may be, if it amounts to \$10,000,000, the contractor would only get a quarter of a million?

Gen. LITTELL. The percentage of profit would remain the same, no matter what the amounts might be; it would never go above \$250,000.

Mr. HULL. Does that same method of contracting apply to the erection of the buildings at the arsenals?

Gen. LITTELL. Not in all cases; no, sir. Some of those contracts at the arsenals were made by the ordnance people and I do not know just what their terms were. The average per cent of profit on these contracts is 2.84. That is on the total cost of the cantonments.

Mr. LUNN. Have you got those averages, that is, what do they average, from what to what, on the cantonments, and then the average on the National Guard camps?

Gen. LITTELL. Yes, I have them all right here.

Mr. SHALLENBERGER. Do you mean that the average net profit was 2.84 per cent, less than 3 per cent?

Gen. LITTELL. Yes, sir.

Mr. SHALLENBERGER. That is, on the entire proposition?

Gen. LITTELL. Yes, sir; on the 16 cantonments; that is the average that all these contractors get, and they have to pay, in some cases, a very heavy war excess profits tax. One of them has to pay about \$130,000.

Mr. LUNN. Will you put that matter in the record?

Gen. LITTELL. Yes, sir.

FEEES PAID CONTRACTORS FOR THE CONSTRUCTION OF NATIONAL ARMY, NATIONAL GUARD, EMBARKATION, AND TRAINING CANTONMENTS AND CAMPS.

Summary of approximate total fees paid general contractor at National Army, National Guard, embarkation, and quartermaster training camps and cantonments.

	Total esti- mated cost.	General con- tractors' fees.	Per cent of total cost.
National Army cantonments.....	\$140,723,473	\$4,000,000	2.84
National Guard camps.....	38,375,272	2,638,534	6.88
Embarkation camps.....	14,194,146	500,000	3.52
Quartermaster training camps.....	3,765,467	225,928	6.00
Machine-shop unit.....	531,473	37,500	7.06
School of fire.....	620,000	47,000	7.00
Total.....	198,273,131	7,449,532	3.76

National Army cantonments—Amounts paid general contractors for fees and per cent fee bears to total cost of work.

Location.	Name.	Contractor's fee.	Per cent contractor's fee bears to total cost.
American Lake, Wash.....	Camp Lewis.....	\$250,000	3.57
Annapolis Junction, Md.....	Camp Meade.....	250,000	2.38
Atlanta, Ga.....	Camp Gordon.....	250,000	3.33
Ayer, Mass.....	Camp Devens.....	250,000	2.57
Battle Creek, Mich.....	Camp Custer.....	250,000	2.87
Chillicothe, Ohio.....	Camp Sherman.....	250,000	2.00
Columbia, S. C.....	Camp Jackson.....	250,000	2.86
Des Moines, Iowa.....	Camp Dodge.....	250,000	3.17
Fort Riley, Kans.....	Camp Funston.....	250,000	2.84
Fort Sam Houston, Tex.....	Camp Travis.....	250,000	3.72
Little Rock, Ark.....	Camp Pike.....	250,000	2.77
Louisville, Ky.....	Camp Taylor.....	250,000	3.55
Petersburg, Va.....	Camp Lee.....	250,000	2.20
Rockford, Ill.....	Camp Grant.....	250,000	2.93
Wrightstown, N. J.....	Camp Dix.....	250,000	2.50
Yaphank, Long Island, N. Y.....	Camp Upton.....	250,000	2.30
Total.....		4,000,000	2.84

National Guard camps—Approximate amount paid general contractors for fees and per cent fee bears to total cost of work.

Location.	Name.	Contractor's fee.	Per cent contractor's fee bears to total cost.
Alexandria, La.....	Camp Beauregard.....	\$185,429	7.00
Anniston, Ala.....	Camp McClellan.....	210,000	6.57
Augusta, Ga.....	Camp Hancock.....	137,747	7.00
Charlotte, N. C.....	Camp Greene.....	210,000	6.57
Deming, N. Mex.....	Camp Cody.....	177,783	7.00
Fort Sill, Okla.....	Camp Deniphan.....	163,226	7.00
Fort Worth, Tex.....	Camp Bowie.....	161,378	7.00
Greenville, S. C.....	Camp Sevier.....	131,001	7.00
Hattiesburg, Miss.....	Camp Shelby.....	210,000	6.38
Houston, Tex.....	Camp Logan.....	137,414	7.00
Linda Vista, Cal.....	Camp Kearney.....	209,514	7.00
Macon, Ga.....	Camp Wheeler.....	146,916	7.00
Montgomery, Ala.....	Camp Sheridan.....	129,053	7.00
Palo Alto, Cal.....	Camp Fremont.....	139,211	7.00
Spartanburg, S. C.....	Camp Wadsworth.....	151,653	7.00
Waco, Tex.....	Camp McArthur.....	138,199	7.00
Total.....		2,638,524	6.88

Embarkation camps, quartermaster training camps, machine-shop units, School of Fire—Approximate amount paid contractors for fees and per cent fee bears to total cost of work.

Location.	Name.	Contractor's fee.	Per cent contractor's fee bears to total cost.
Embarkation camps:			
Newport News, Va.....	Camp Stuart.....	\$250,000	3.11
Tenafly, N. J.....	Camp Merritt.....	250,000	4.07
Quartermaster training camp: Jacksonville, Fla..	Camp Johnston.....	500,000	.....
Machine-shop unit: Washington, D. C.....	Camp Ordway.....	225,928	6.00
School of Fire: Fort Sill, Okla.....		37,500	7.06
		47,600	7.00

Mr. LUNN. I want to ask you regarding the contracts, whether any one contractor got a contract for more than one cantonment, or did any one contractor get a contract for the whole cantonment?

Gen. LITTELL. The contract for the whole cantonment was given to one contractor; but under certain conditions he was authorized to sublet such things as plumbing and electric lighting, because that is always done.

Mr. LUNN. Will you put in the record a list of those contractors for the 32 cantonments?

Gen. LITTELL. Yes, sir; we have a tabulated statement of all that. (The matter referred to is as follows:)

Names of contractors and date camp sites were approved, contracts executed, and work started.

Location.	Name.	Name of contractor.	Address.	Date camp sites were approved.	Date contracts were executed.	Date work was started.
National Army camps:						
American Lake, Wash.	Camp Lewis.	Hurley, Mason & Co.	Tacoma, Wash.	May 31	June 15	June 14
Annapolis Junction, Md.	Camp Meade.	Smith, Hauser & Melissac.	New York City.	June 22	June 23	July 2
Atlanta, Ga.	Camp Gordon.	Arthur Tufts Co.	Atlanta, Ga.	June 2	June 21	June 18
Ayer, Mass.	Camp Devens.	F. T. Ley & Co.	Springfield, Mass.	May 31	June 11	June 13
Battle Creek, Mich.	Camp Custer.	Porter Bros.	Detroit, Mich.	June 11	June 19	June 19
Chillicothe, Ohio.	Camp Sherman.	A. Bentley Sons Co.	Toledo, Ohio.	June 21	June 21	July 6
Columbia, S. C.	Camp Jackson.	Hardaway Construction Co.	Columbus, Ga.	June 2	June 11	June 15
Des Moines, Iowa.	Camp Dodge.	Charles Welby Sons.	Des Moines, Iowa.	June 27	June 22	June 19
Fort Riley, Kans.	Camp Funston.	George A. Fuller Co.	New York City.	June 13	June 20	June 28
Fort Sam Houston, Tex.	Camp Travis.	Stone & Webster.	Boston, Mass.	June 11	do.	June 14
Little Rock, Ark.	Camp Pike.	James Stewart & Co.	New York City.	do.	June 23	June 17
Louisville, Ky.	Camp Taylor.	Mason & Hanger.	Richmond, Ky.	do.	June 20	June 23
Petersburg, Va.	Camp Lee.	Rhinehart & Dennis Co. (Inc.).	Charlottesville, Va.	June 8	June 18	June 20
Rockford, Ill.	Camp Grant.	Bates & Rogers Construction Co.	Chicago, Ill.	June 21	June 21	June 24
Wrightstown, N. J.	Camp Dix.	Irwin & Leighton Co.	Philadelphia.	June 2	June 14	June 12
Yaphank, L. I.	Camp Upton.	Thompson-Starrett Co.	New York, N. Y.	June 18	June 23	June 21
National Guard camps:						
Alexandria, La.	Camp Beauregard.	Stewart-McGhee Construction Co.	Little Rock, Ark.	July 12	July 17	July 23
Anniston, Ala.	Camp McClellan.	J. O. Chisholm & Co.	New Orleans, La.	June 21	June 18	July 20
Augusta, Ga.	Camp Hancock.	T. P. Brown & Son.	Augusta, Ga.	do.	July 18	July 19
Charlotte, N. C.	Camp Greene.	Consolidated Engineering Co.	Baltimore, Md.	July 12	do.	July 20
Deming, N. Mex.	Camp Cody.	J. W. Thompson.	St. Louis, Mo.	June 11	do.	do.
Fort Sill, Okla.	Camp Doniphan.	Seldin Ice & Construction Co.	do.	do.	July 17	July 25
Fort Worth, Tex.	Camp Bowie.	J. W. Thompson.	St. Louis, Mo.	do.	July 18	July 24
Greenville, S. C.	Camp Seyler.	Gallivan Building Co.	Greenville, S. C.	June 21	do.	July 16
Hartlesburg, Miss.	Camp Shelby.	T. R. Moody & Co.	Chattanooga, Tenn.	June 12	do.	July 21
Houston, Tex.	Camp Logan.	American Construction Co.	Houston, Tex.	June 11	do.	July 24
Linda Vista, Cal.	Camp Kearny.	W. E. Hampton & Co.	Los Angeles, Cal.	May 24	July 17	July 25
Macon, Ga.	Camp Wheeler.	W. Z. Williams Co.	Macon, Ga.	June 21	July 18	July 18
Montgomery, Ala.	Camp Sheridan.	A. Blair.	Montgomery, Ala.	do.	do.	July 20
Palo Alto, Cal.	Camp Fremont.	Lindgren & Co.	San Francisco, Cal.	June 37	July 26	July 24
Spartanburg, S. C.	Camp Wadsworth.	Wick, Carter Construction Co.	Greenville, S. C.	June 21	July 17	July 19
Waco, Tex.	Camp MacArthur.	Fred A. Jones Construction Co.	Dallas, Tex.	June 11	do.	July 20
Embarkation camps:						
Newport News, Va.	Camp Stuart.	Westinghouse, Church, Kerr & Co.	New York, N. Y.	Aug. 8	Aug. 16	Aug. 18
Tenafly, N. J.	Camp Merritt.	McArthur Bros.	do.	Aug. 1	Aug. 1	Oct. 1
Quartermaster training camps: Black Point, Jacksonville, Fla.		A. Bentley Sons & Co.	Toledo, Ohio.	do.	Sept. 25	do.
Miscellaneous points. Repair-shop units, Camp Ordway, Washington, D. C.		P. F. Gormley & Co.	Washington, D. C.	do.	Sept. 24	Sept. 27

¹ Camp Fremont temporarily abandoned when construction work was 70 per cent completed.

Mr. LUNN. I was in one department this morning and saw a sign reading, "Stone & Webster's office." Have they done any of your work?

Gen. LITTELL. Yes, sir.

Mr. LUNN. This was not in your department, and I wondered how far they were doing the work of the Government.

Gen. LITTELL. They did the San Antonio cantonment, and did remarkably well on it. Of course, they had a lot of comparatively good weather. At some of these cantonments ever since they have started, the weather has been unusual, not only in the summer time, when it rained more than usual, but then there was also all this cold weather.

Mr. LUNN. Has there come to your attention the knowledge of any excessive wages being paid, the argument for that being based on the supposition that because the work was being done on a cost plus basis that the contractor did not care how high the wages went?

Gen. LITTELL. I have a little information. I get this information through letters which we are continually receiving from all sorts of people, workmen who have been discharged, and some who have not been able to get a job, and from cranks who are continually writing to the Secretary of War in regard to that matter, and of course they are sent for reply to our office, for the facts. I have seen it stated in those letters by men that they did not care whether they worked or not, that the contractor was designing to get just as many men as he could get, because the more men that were on that particular job getting big pay the more benefit the contractor would get out of it. But that is not the case after they go beyond a certain point.

I think myself that the greatest cause for the cost of these cantonments is due to the fact that there has been such a large amount of inefficient labor that had to be employed. You could not get any other kind.

Expert men in their lines could not be gotten, and in order to get the cantonments done on time, we had to take what labor we could get, and as it turned out, we employed a lot of men, and they would work a few days, and then we would have to discharge them, or they would quit themselves. There have been as many as 110,000 men enrolled at one camp, and out of that whole number there were not a greater number than 10,000 working on any one day at the greatest maximum point of activity.

Mr. LUNN. It is fluctuating labor entirely?

Gen. LITTELL. Yes, sir. In reference to the matter of the wage scale, that was fixed in a memorandum of agreement between the Secretary of War and Mr. Gompers. That was put into effect, and it provided that the wages to be paid would be according to the union scale of wages in existence in the locality on the 1st of June.

Mr. LUNN. That was perfectly fair.

Gen. LITTELL. I do not know how you could ever have regulated that in any other way. The camps might have been bidding against each other and the contractors for the cantonments might have been bidding against contractors for other Government work, and it might have upset the whole thing generally.

Mr. SHALLENBERGER. I was at one of those camps, and I was told that the men who worked overtime and on Sundays got a very great increase above the union scale.

Gen. LITTELL. They were paid the same as the union scale in the locality, that is time and a half for overtime and double time for Saturday afternoons and Sundays.

Mr. GORDON. I understood you to say that all of these locations were recommended to the Chief of Staff?

Gen. LITTELL. Of course that means to the Secretary of War, who finally passed on them.

Mr. GORDON. And the camp sites for the National Army were selected first?

Gen. LITTELL. Yes, sir. I dare say that the same boards that were sent out were doing both, but the camp sites for the National Guard were not approved until later. That is, they were not given to us.

Mr. GORDON. Who fixed these rentals that are paid for the sites?

Gen. LITTELL. They were recommended by the boards which selected the camp sites, and I presume they were approved by the department commanders.

Mr. GORDON. I understood you to say that the cost of constructing many of these cantonments was enormously increased by the bad weather.

Gen. LITTELL. I did not say it was enormously increased by the bad weather, but I said that delayed things.

Mr. GORDON. That would result in increased cost, of course.

Gen. LITTELL. Not necessarily. It might some, however. It is harder to work. They do not accomplish as much on a day when it is raining hard as they would on a clear day.

Mr. GORDON. Was there any provision in the contracts requiring the contractor to furnish supervisors or inspectors over the men to see that the men employed were actually at work?

Gen. LITTELL. Yes, sir. They were required to have the usual experienced foreman, and all that sort of thing, and we had a number of officers on each job, but even with that you could not make them work.

The great difficulty, especially in places like Yaphank, and also other places, too, but more so in some places than in others—the great difficulty was to get good, efficient, honest foremen. They are not in the market, and the contractor had to take the best men he could pick out for that work, and if he discharged the foreman the question was where to get another one. You could not find one that was any better.

That whole question was studied very carefully by Gen. Bell and the constructing quartermaster, and the contractor at Yaphank. It was a very bad situation, and there was considerable criticism about the large amount of inefficient labor loafing on the job, etc., and Gen. Bell worried about it a great deal, and called me up there to consult with him to try to devise some means of preventing it.

He brought certain officers from the training camps to go around and observe the work and report on all the foremen, each officer to go to a different crowd every day, so that he would not be prejudiced, and so that he could get a good fair estimate from the various officers as to which foremen were doing their duty and which ones were not, and the contractor said he was perfectly willing to have that done,

but he said to Gen. Bell, "What am I to do if this foreman is reported? If I discharge him, can you furnish me with another one that is any better?" Gen. Bell had to say he did not know of any way to remedy that situation.

Loafing on the job nowadays is not peculiar to Government work. You can find it wherever you go. We had Secret Service men on all of these jobs looking around for all sorts of things, and especially watching this inefficient labor loafing. One of those Secret Service officers at Camp Meade sent in his report to the Department of Justice, and it was sent down to me to see if there was anything in it that we wanted to correct. This Secret Service man stated in his report that he had paid particular attention to a gang of men, about 40 of them, who were working for a contractor, whom he named. He reported a great deal of loafing and told exactly how many minutes in each hour each man worked, and when that was sent to me and I looked it up I found out that that particular contractor was working for the Pennsylvania Railroad Co., and not for us. But you can see loafing anywhere. Go in any one of the apartment houses building here, and when there is no foreman around you will see a lot of loafing on the job. You will even see that in your own house, when you are having work done.

Mr. QUIN. Did the war cause that?

Gen. LITTELL. No, sir; I do not believe the war has anything to do with it, except in this way, that it has created an enormous demand for labor, and these men know if they are fired from one job it is very easy for them to get another one.

Mr. LUNN. You would not say that that was true of all of the workmen, would you? You must have had some good ones?

Gen. LITTELL. I want to qualify that by saying that the skilled workmen, usually the men belonging to the unions who are skilled, stick to their jobs and do work good and hard.

Mr. LUNN. These men who loaf on the job are the casuals, the fluctuating fellows?

Gen. LITTELL. They are in the class of laborers--and there are thousands of them--who do not care, and who have never gotten anywhere because they do not care. They are not particularly good mechanics, and just now they do not care, because they can get a job anywhere they please. Railroad men are leaving to go into munition plants, brakemen and firemen are leaving to go into other jobs because they get more money temporarily.

Mr. LUNN. I would like to ask you regarding the class of materials for the cantonments; how the prices of raw materials were fixed, for instance, on lumber, and other items of that kind.

Gen. LITTELL. There was a committee of the Council of National Defense, an advisory committee on lumber, and they coordinated the lumber interests. They first fixed the price of lumber, I think it was at \$22 or \$24. Then we had some further discussion with them, and finally, after going over the whole situation again and getting a lot of other men from the lumber mills into the circle who had not been in before, and who had declined to come in, they reduced the price of lumber to about \$20. That has been the rule ever since.

We go to them for advice. Our instructions are that their decisions are not mandatory, that they are simply acting in advisory capacity. Those are the instructions given to us by the Secretary of War. and we have always so considered them.

If we have any large construction job, we prepare a schedule of the lumber we need and send the schedule to them, and tell them where the building is going to be erected, and that we will need so much lumber in the various sizes, and then they recommend to us where we should purchase that lumber. We do not always do it, for the reason that we get a job started and we find out that the lumber from that place or some other place, from the mill, could not get to us in time not to delay the job, and therefore we find that it is cheaper to pay the market price for the lumber than it is to keep a lot of men lying idle.

In this way we have gotten our lumber very much cheaper than market prices.

In reference to the other large number of materials we use, the next largest would be, naturally, plumbing. At the beginning, we called all of the manufacturers of plumbing supplies together and stated the case to them, what we were going to do, and about the quantities we thought we would need, and asked them to get together and see what they could do for us in the way of furnishing supplies promptly in the quantities we wanted and at reasonable rates. They did that very willingly, organized right away, and shortly reported to us giving a price list of all the supplies that they would furnish as we needed them, agreeing to have all of the orders placed through one of the large firms, that firm to distribute them equitably among the various manufacturers, according to what they could produce.

That was entirely agreeable to them, and most of those supplies we got at very reasonable rates, some of them cheaper than we had been paying for them under our regular contract. One of the largest items under that head was water closet outfits, 54,000 of them, and for those we had been paying about \$21, and we were able to get a reduction of price on them to about \$16, buying right direct from the manufacturers.

Mr. GORDON. You say you got the lumber at less than the market price?

Gen. LITTELL. When I say less than the market price, I mean, for instance, if we want lumber right away to-day or to-morrow, in New York City, we will have to pay a price, probably more than we are paying for it by getting it on the advice of the lumber committee. They could tell us where we could get that lumber in the neighborhood of \$20 or \$22, but if we want to buy it from one of the big yards in New York City, we have got to pay the market price for it, and that not only includes the price of the lumber, but the price of delivering it, and the various other overhead charges they have.

Mr. GORDON. When you speak of a standard price, do you mean that all the lumber that went into the cantonments was furnished at the same price per thousand feet?

Gen. LITTELL. Not exactly. The various dimensions of lumber cost various prices.

Maj. MARSHALL. The average price was about \$20. Fifty-four thousand carloads of lumber were used in the first four months, July, August, September, and October.

Mr. GORDON. What did you say the average price of that was?

Gen. LITTELL. Between \$20 and \$22.

Mr. ANTHONY. Was that at the mills, or delivered?

Gen. LITTELL. At the mills.

Mr. GORDON. At the mills?

Gen. LITTELL. At the mills; yes, sir. Then it was all shipped at Government rates.

Mr. GORDON. Are the Government rates for shipping higher or lower than the ordinary rates?

Gen. LITTELL. They are lower in some cases. That would be the case on any of the land-grant or free roads, and we had to take advantage of all those things wherever that was allowed.

Mr. OLNEY. I have seen a list of the names of the members of this so-called emergency construction committee, and it consists of civilians who, in commercial life, receive salaries of from \$6,000 to \$30,000 a year.

Gen. LITTELL. I know they are very high-grade men.

Mr. OLNEY. I have heard, also, of some dissatisfaction among the members of these committees, and that a number of them left to go into the Ordnance Department, where they receive commissions. Is that true?

Gen. LITTELL. I do not know.

Mr. OLNEY. You think that committee is intact, as far as you know?

Gen. LITTELL. They have changed several times; first one man going, and then another. When this work first commenced, we saw a great deal of the members of the committee because they advised us in a great many ways where to get expert engineers that we have on the jobs; and the men whom we have commissioned received salaries in civil life which amount to very much more than their commissioned pay. We saw a great deal of them, almost every day; but since that time we only come in contact with them, possibly occasionally, sometimes with the chairman of that committee, and I understand that it has changed in several respects since the early days. Mr. Olendorf used to be on that committee, but he is no longer there. Mr. Tuttle is another man who, I understand, has gone to the Shipping Corporation.

Mr. OLNEY. Are there any members of your board who have been commissioned?

Gen. LITTELL. Maj. Starrat has been commissioned.

Mr. OLNEY. The others are all \$1 a year men?

Gen. LITTELL. The others are all \$1 a year men; yes, sir.

Mr. OLNEY. To whom are you directly responsible?

Gen. LITTELL. To the Secretary of War, through the Quartermaster General.

Mr. SHALLENBERGER. How many of the uncommissioned officers have you had on this board?

Gen. LITTELL. I do not know. That board was just acting in an advisory capacity.

Mr. SHALLENBERGER. Was it a large board, or a comparatively small board?

Gen. LITTELL. I think there were not more than five members on it at any one time. Which committee are you talking about?

Mr. SHALLENBERGER. The one Mr. Olney was talking about.

Gen. LITTELL. That is, the emergency construction or lumber committee?

Mr. OLNEY. This general committee on construction.

Gen. LITTELL. There are two committees we have had a great deal to do with.

Mr. OLNEY. There were as many as 18 or 20 on the general board?

Gen. LITTELL. I do not think there have ever been more than four or five on the committee on emergency construction, and the lumber committee never had more than three or four members present. How many members they had, I do not know.

Mr. FIELDS. I think there are several men who served on that committee who have alternated, that is, one would serve one week and the next week another man would take his place.

Mr. SHALLENBERGER. The point I had in mind was this: It has been brought out that the members of that board, seemingly, were willing to serve without commissions, whereas possibly it might be brought out later that other boards found it more efficient to secure men by commissioning those who served on the different boards.

Gen. LITTELL. The Ordnance people also use this Council of National Defense, and the committees of the Council of National Defense in an advisory capacity, but they have taken in a great many officers who are skilled along certain lines and given them commissions. I do not know whether they have gotten them through the boards or not. The Signal Corps has done the same thing. We have a number of men in our division and some of them have commissions in the Engineer Corps, and we have one in the Ordnance Corps, and, of course, a lot of quartermasters, but they have been picked out for their ability as constructors and civil engineers, and water engineers, and mechanical engineers.

Mr. ANTHONY. You stated that the War Department called upon you for specifications for buildings to house a million men. What was the date when the War Department called upon you for this information?

Gen. LITTELL. It was back at the beginning of the year. I have not a particularly good memory for dates.

Mr. ANTHONY. At the beginning of the year 1917?

Gen. LITTELL. Yes, sir; it was back some time before the month of May.

Mr. ANTHONY. You said a while ago you thought it was before the declaration of war.

Gen. LITTELL. Yes, sir, it was.

Mr. ANTHONY. Can you put that date in the record?

Gen. LITTELL. I can get it for you.

(The data is here inserted:)

MARCH 13, 1917.

To the C. AND R. DIVISION:

Please prepare and submit to the estimates branch, within the next five days, detailed statement of the cost of original equipment, including equipment C, supply trains, ammunition trains, animals, motor-truck equipment, motorcycles, automobiles, subsistence, fuel, forage, clothing and equipage, temporary shelter, temporary stores, houses, and other items necessary for equipment of 10 field armies based on photographic copy of table representing divisions at war strength, as authorized by national-defense act. Composition of field army to be as per photo copy of table, page 31, Tables of Organization, figuring on a total of 43,000 officers, 1,018,270 enlisted men, for a period of one year.

The statements called for should be in sufficient detail to permit of full explanation of the estimate.

This is in confirmation of my verbal instructions of this morning.

HENRY G. SHARPE, *Quartermaster General*.

Estimated cost of providing temporary construction, etc., for an emergency force of 43,000 officers and 1,018,270 enlisted men for a period of one year.

Item No.

1. Construction of temporary buildings required for shelter of troops, animals, and supplies, at \$40 per capita.....	\$42,450,800.00
2. Maintenance of above construction, at 5 per cent.....	2,122,540.00
3. Construction of temporary hospitals, at \$2 per capita.....	2,122,540.00
4. Maintenance of temporary hospital buildings, at 5 per cent.....	196,127.00
5. Construction of water and sewer systems, at \$1.75 per capita.....	1,857,222.50
6. Maintenance of water and sewer systems, at 10 per cent.....	185,722.25
7. Construction of electric-lighting systems, at 60 cents per man....	636,762.00
8. Maintenance of electric-lighting systems, at 10 per cent.....	63,676.20
9. Construction of roads, drainage, and clearing, at \$5 per man.....	5,306,350.00
10. Maintenance per year, at 10 per cent.....	530,635.00
11. Construction and maintenance of wharves, dredging, etc., at Coast Artillery posts based on requests now on hand, which are being received daily for these purposes.....	300,000.00
12. Rental of recruiting stations, at \$1.184 per man, and hire of lodgings, at 92 cents per man.....	2,142,440.00
13. Rental of camp sites, at \$2 per man per year.....	2,122,540.00
14. Rental, construction, and repair of target ranges, at \$2 per man per year.....	2,122,540.00
15. Disposal of garbage, at \$3 per man per year.....	3,183,810.00
16. Purchase of toilet paper, garbage cans, urinal cans, etc., at \$2 per man per year.....	2,122,540.00
17. Purchase of water, at \$4.80 per man per year.....	5,094,096.00
18. Purchase of electric current, at \$4.80 per man per year.....	5,094,096.00
Total.....	77,564,436.95

NOTES.

Item 1.—The amount estimated for under this item is based on a per capita of \$40, this per capita having been arrived at by using as a basis the actual cost of temporary buildings recently erected under the approved mobilization plans. Estimate is submitted for temporary buildings owing to the fact that canvas shelter is deemed expensive and it is doubtful whether the supply thereof would be sufficient to house an army of the size contemplated.

Item 2.—The amount herein estimated for maintenance of these buildings will be required to replace buildings destroyed by storms, fires, etc., and for making ordinary repairs. It is thought that the amount estimated for these purposes is reasonable and conservative.

Item 3.—The amount estimated for temporary hospitals is based on actual cost of similar accommodations recently constructed along the Mexican border.

Item 4.—Same as item 2.

Item 5.—This estimate is intended to cover construction of temporary water and sewer systems at various mobilization camps for troops, and is figured on a per capita basis of \$1.75, which recent experience has demonstrated will be required for these sanitary facilities at camps of this character.

Item 6.—Estimate submitted for maintenance of above water and sewer systems at 10 per cent of original cost is considered reasonable.

Items 7 and 8.—In preparing this estimate it has been assumed that mobilization camps will be lighted by electricity. If, however, these camps are to be lighted by mineral oil this estimate can be reduced to \$1,000,000.

Items 9 and 10.—It is considered absolutely necessary in large mobilization camps especially to provide for a system of roads. There will also be required a certain amount of grading and clearing for the necessary drilling and maneuvering of troops. Experience in the past has demonstrated that this work can not be satisfactorily performed by troop labor, and estimate is submitted for these purposes, on a per capita basis of \$5, which is considered reasonable and conservative.

Item 11.—Several requests are now in this office for construction of new wharves, repairs to existing wharves, and dredging channels at Coast Artillery posts. These requests now aggregate over \$100,000, and as similar conditions are known to exist at other Coast Artillery posts with respect to these items, it is estimated that at least \$300,000 would be a conservative estimate to cover these requirements throughout the country.

Item 12.—This estimate is based on the actual cost of the rental of recruiting stations and the hire of lodgings for recruits.

Item 13.—This estimate is intended to cover the rental of the necessary sites for mobilization camps, etc., including the necessary space for drilling and maneuver purposes, which will be necessary incident to the training of a volunteer army.

Item 14.—This estimate contemplates the rental, construction, and maintenance of target ranges at mobilization camps, etc.

Items 15, 16, 17, and 18.—Estimates under these items are based on the average cost per capita as stated, which past experience has demonstrated will be required for these purposes.

(Confidential.)

WAR DEPARTMENT,
THE ADJUTANT GENERAL'S OFFICE,
Washington, March 21, 1917.

From: The Adjutant General of the Army.

To: The Quartermaster General.

Subject: Estimates for equipment of Army of 1,000,000 men.

The Secretary of War desires that you prepare estimates for the supplies pertaining to your bureau needed to equip an army including the present Regular Army and the National Guard, of 1,000,000 men organized into 32 Infantry and 4 Cavalry divisions and Army corps troops sufficient for 12 Army corps. The estimate for the Quartermaster Department will include cantonment construction for such portion of the force as can not now be sheltered in Army posts in the United States. Cantonment construction to be of the type considered by the General Staff in its report on universal service.

By order of the Secretary of War:

WM. M. CRUIKSHANK,
Adjutant General.

Estimated cost of providing temporary construction, etc., for an emergency force of 43,000 officers and 1,034,270 enlisted men, after deducting accommodations now available in the United States for 70,000 officers and enlisted men, for a period of one year.

1. Construction of temporary buildings required for shelter of troops, animals and supplies at \$40 per capita.....	\$40,290,800.00
Temporary shelter for Coast Artillery supports.....	181,730.00
2. Maintenance of above construction at 5 per cent.....	2,023,626.50
3. Construction of temporary hospitals at \$2 per capita.....	2,014,540.00
4. Maintenance of temporary hospital buildings at 5 per cent.....	100,727.00
5. Construction of water and sewer systems at 75 cents per capita...	1,762,722.50
Water supply systems for Coast Artillery supports.....	230,741.00
6. Maintenance of water and sewer systems at 10 per cent.....	199,346.35
7. Construction of electric lighting systems at 60 cents per man.....	604,362.00
8. Maintenance of electric lighting systems at 10 per cent.....	60,436.20
9. Construction of roads, drainage and clearing at \$5 per man.....	5,036,350.00
10. Maintenance per year at 10 per cent.....	503,635.00
11. Construction and maintenance of wharves, dredging, etc., at Coast Artillery posts based on requests now on hand, which are being received daily for these purposes.....	300,000.00
12. Rental of recruiting stations at \$1.184 per man, and hire of lodgings at 92 cents per man.....	2,119,296.08
13. Rental of camp sites at \$2 per man per year.....	2,014,540.00
14. Rental, construction, and repair of target ranges at \$2 per man per year.....	2,014,540.00

15. Disposal of garbage at \$3 per man per year.....	\$3, 231, 810. 00
16. Purchase of toilet paper, garbage cans, urinal cans, etc., at \$2 per man per year.....	2, 154, 540. 00
17. Purchase of water at \$4.80 per man per year.....	5, 170, 896. 00
18. Purchase of electric current at \$4.80 per man per year.....	5, 170, 896. 00
19. Purchase of ice boxes for preservation of food in camps at 25 cents per capita.....	269, 317. 50
20. Sanitation at Coast Artillery supports.....	198, 240. 00
	<hr/>
	75, 653, 092. 13

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF STAFF
Washington, May 29, 1917.

Memorandum for the Adjutant General of the Army.
Subject: Cantonment construction program.

The Secretary of War directs that the instructions previously given regarding the construction of cantonments for the National Army and the National Guard (WCD 6374-29) be amended to the following effect:

1. Cantonment for 16 National Army divisions will be constructed first and completed by September 1, 1917.

2. The Quartermaster General will be furnished with a copy of the accompanying memorandum (additional copy herewith) and informed that the plans for the construction of cantonments as indicated by the accompanying estimate of May 26, 1917, are approved except as follows:

(a) Fly screens except for kitchens and mess halls will be omitted.

(b) Refrigerating and ice plants will be omitted.

(c) Hospitals will be reduced so as to provide accommodations for the sick upon a 3 per cent basis instead of upon the basis of 5 per cent, as recommended by the Medical Department.

(d) The plans will be further modified in accordance with the remarks in paragraph 6 of the accompanying memorandum in all cases in which the omissions indicated will make the economy without resulting in loss of efficiency.

3. Construction of divisional cantonments for the National Guard will be postponed until otherwise ordered.

4. In case any site already selected for a National Army division cantonment on private land is located in the same divisional area with a site selected for a National Guard Division cantonment on public land, the department commander concerned be directed by telegraph to report at once by wire whether or not it is advisable to locate the cantonment for such National Army division upon the site selected for such National Guard division.

5. That all concerned be informed of the foregoing, and department commanders be instructed to report as soon as possible the sites selected for the National Army division cantonments, and informed that they will take no further action with respect to cantonments for the National Guard, except to recommend sites therefor, and that they will close no further contracts for such sites.

TASKER H. BLISS,
Major General, Acting Chief of Staff.

Approved by Secretary of War after personal consideration by him.

T. H. B.

[First indorsement.]

WAR DEPARTMENT,
ADJUTANT GENERAL'S OFFICE,
May 29, 1917.

To the Quartermaster General, for his information and guidance, attention being invited to the accompanying inclosures.

By order of the Secretary of War.

_____, Adjutant General.

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF STAFF,
Washington, May —, 1917.

Memorandum for the Chief of Staff:

Subject: Cantonment construction program.

1. On May 27, 1917, the War College Division was informed that the Chief of Staff directed that a study be made of the question of cantonment construction in connection with existing conditions relating to supplies, labor, and transportation, and that the advisability of sending troops to Canada, England, or France for training in the near future be considered.

2. Conference was had with Col. I. W. Littell, Quartermaster Corps, in charge of cantonment construction, Office of the Quartermaster General, who stated in effect that investigation has shown that it will be physically impossible, under existing conditions relative to supplies, labor, and transportation, to construct cantonments for the 32 divisions as recommended in WCD 6374-29, May 4, 1917, within the specified time. He also stated that it is possible to construct the essentials of the 16 cantonments for the division of the National Army by September 1, 1917, by using all the money available for cantonments and by creating a deficiency. In other words, if he were given a free hand and not subjected to interference or compelled materially to change his plans, he could so far complete the cantonments for the 16 divisions of the National Army that they would be ready for occupancy by September 1, 1917; that before that date sufficient shelter and other essentials could be made ready in each cantonment to accommodate the training cadres and other detachments which should precede the divisional troops to prepare for their receptions.

The attached copy of a letter (marked "A"), dated May 25, 1917, from the committee on emergency construction of buildings and engineering works, indicate that Col. Littell's estimate of the situation is correct.

3. It is evident from the statements in this letter, which are in all essential particulars confirmed by information obtained indirectly from the Munitions Board and other reliable sources, that the construction of even these 16 cantonments would subject the resources of the country to a considerable strain and that no other construction of like character can be undertaken while this work is in progress without delaying its completion and at the same time materially disorganizing our agricultural and other industries. Consequently it appears necessary not to initiate the construction of cantonments for the National Guard or horse depots at this time. It is equally necessary, if the National Army cantonments are to be completed by September, 1917, that their construction commence without delay.

4. Therefore, in order to expedite the inauguration of this work, the question of shelter for the National Guard and for replacement troops will be reserved for consideration in a subsequent memorandum to be submitted in the near future and to obtain recommendations as to the advisability of sending troops outside of the United States for training.

5. Herewith is a table, marked "B," prepared in the office of the Quartermaster General, which shows a summary of estimates for cantonments for the National Army and National Guard (in all 32 divisions).

6. The following remarks with reference to the items in the column in this table headed "Possible omissions and substitutions," under the estimate of May 26, are submitted.

(a) "Substitution of latrine trenches for water-closets and urinals." The War College Division is of the opinion that while water-carried sewerage is generally advisable, it may be possible in certain cantonment sites where the lay and character of the ground is favorable to substitute earth latrines. Where water-carried sewerage must be installed, the character of the installation should be of as simple character as possible, both with a view to reducing the first cost and to be able to use the labor of troops for its maintenance. In this connection the type of latrines used in the cantonment of the Second Division at Texas City merits consideration.

(b) "Omission of steam heat for barracks at northern cantonments." As a rule this item should not be omitted because of the fire risk resulting from the use of stoves and also because the employment of steam heat will result in ultimate economy. However, it is possible that local conditions, even at northern cantonments, may make the use of stoves advisable.

(c) "Substitution of kerosene lamps for electric lights when current is not obtainable from existing sources." This should not be done, because of the resulting increased fire risk, and because economy will ultimately result from the use of electricity. Plants should not be constructed in cantonments where current can be obtained locally at reasonable prices.

(d) "Reduced sewerage if water-closets are omitted." Remarks in (a) above apply here.

(e) "Omission of laundries." As a rule the construction of laundries will be necessary. Intensive training will require practically all the time of the drafted force and the operation of Government laundries will result in better sanitary conditions. If they are omitted, either the men will be obliged to devote their recreation periods to washing clothes or the cantonments will be overrun by civilians soliciting and delivering laundry. However, if satisfactory laundry service at reasonable prices can be obtained locally, the construction of Government laundries may be omitted.

(f) "Reduction of railroad construction on assumption that railroad companies will build distribution tracks in cantonments at their own expense." It is desirable to effect this reduction if possible. However, our experience indicates that the railroads will not construct trackage within cantonments at their own expense. It therefore seems unwise to count on this reduction.

7. It is believed that the following deductions should be made:

(a) "Omission of fly screens except for kitchens." These cantonments will be first occupied next fall, when screens will not be absolutely necessary. However, it is believed that both the kitchens and mess halls should be screened before occupancy. Other screening, if required, could be supplied before the summer of 1918.

(b) "Omission of refrigerating and ice plants." This item can be omitted because supplies requiring refrigerating service could be furnished in refrigerator cars as needed.

(c) "Reduction in size of hospital below estimates submitted by the Medical Department." Our experience indicates that our normal sick rate is about 3 per cent. The Medical Department apparently has estimated on the basis of a 5 per cent sick rate. It is believed that the hospitals should be constructed on the 3 per cent basis.

8. The summary of estimates for cantonments for the National Army and National Guard submitted by the Quartermaster Corps, May 26, 1917, amounts to \$192,393,200 or \$96,196,600 for the cantonments for the 16 divisions of the National Army. (In the absence of accurate data it has been assumed that the cost of the 16 National Army division cantonments would be one-half of the estimated cost of the 16 cantonments for the National Army and the 16 for the National Guard, 32 in all. As a matter of fact, the 16 National Army cantonments will cost more than this assumed one-half. This is because troops will be attached to the National Army division and practically none will be attached to the National Guard.) The deductions recommended above would effect savings as follows:

(a) Omission of fly screens except for kitchens.....	\$1, 369, 600
(b) Omission of refrigerating and ice plants.....	2, 140, 000
(c) Reduction in size of hospital below estimate submitted by the Medical Department.....	4, 176, 000
Total deductions.....	7, 685, 600
Total estimate for cantonments for National Army (16 divisions).....	96, 196, 600
Total deductions recommended.....	7, 685, 600

Corrected estimate for cantonments for National Army (16 divisions) 88, 611, 000

The appropriation bill now pending before Congress carries an item of about \$77,000,000 for cantonments. Of this amount about \$9,000,000 have been obligated for cantonments for the Regular Army and about \$10,000,000 will be required for various supplies such as bunks, mattresses, etc.; \$58,555,000 will be available for the construction of cantonments for the National Army. The construction of these cantonments will, therefore, in accordance with the above-corrected estimate, create a deficiency of about \$29,956,000.

9. The War College Division is of the opinion that it is a matter of prime importance that accommodations for the 16 divisions of the National Army be ready for occupancy on the date set for the mobilization. If the mobilization is to be delayed because shelter is not then ready for them, or if they are required to assemble in cantonments which lack any of the essentials, the effect upon the country will be far from favorable.

10. Action is recommended now as indicated in the memorandum, herewith for The Adjutant General of the Army.

JOSEPH E. KUHN,
Brigadier General, General Staff,
Chief of War College Division,
Assistant to the Chief of Staff.

Mr. ANTHONY. How long after that date when you were called upon for specifications did you furnish the specifications?

Gen. LITTELL. We already had our plans.

Mr. ANTHONY. You had them ready?

Gen. LITTELL. We had standard plans.

Mr. ANTHONY. How long after you had furnished the plans, which, I presume, was really upon request, was construction commenced on these Army cantonments?

Gen. LITTELL. That estimate was submitted, I think, to the Secretary of War about February or March, and the construction of the cantonments was not begun until June.

Mr. ANTHONY. What was the cause in the delay in the commencement of construction?

Gen. LITTELL. In the first place, the camp sites were not selected. While the camp sites were being selected, we were building our organization to do this work, drawing the plans, and all that sort of thing, preparing the contracts.

Mr. ANTHONY. So that three or four months' time was consumed in selecting sites?

Gen. LITTELL. The bill appropriating the money was not passed until June.

Mr. ANTHONY. That would not have delayed the selection of the sites, would it?

Gen. LITTELL. No. The Quartermaster General's Office asked several times where these sites were to be, and as I stated previously, that matter was first turned over to the War College to determine the location of these sites, and they could not do it, and then later it was turned over to the department commanders to make the selections, and recommendations for the location of the sites.

Mr. ANTHONY. So that there was a delay. The sites for those cantonments could have been awarded at that time?

Maj. OURY. Not until the conscription bill became a law did they finally consummate the plans.

Mr. ANTHONY. But the department knew they were going to have an Army before that time?

Gen. LITTELL. I understand.

Mr. ANTHONY. I would not regard that as an excuse. General, the Quartermaster General's Department has always had a bureau of constructing quartermasters, has it not?

Gen. LITTELL. Yes, sir.

Mr. ANTHONY. And it has always had a reputation of being fairly efficient, has it not?

Gen. LITTELL. I hope so.

Mr. ANTHONY. I have always heard that that was so. Your system has been heretofore to let the contracts to the lowest bidder.

Gen. LITTELL. Yes, sir.

Mr. ANTHONY. And you had an organization at the time you were called upon to furnish the specifications, which was regarded as able to handle almost any problem that would be given to the Army?

Gen. LITTELL. We had been up to that time. Nothing like this had ever been tried before.

Mr. ANTHONY. Your organization was an able and competent organization of construction quartermasters, was it not?

Gen. LITTELL. We had a force in the construction department which was capable of handling anything the quartermaster's department had had up to that date, but they had never had anything that would compare in the slightest way with the enormity of this task.

Mr. ANTHONY. But you had been contemplating the housing of an additional army for several years, had you not? It had been in the plans of the department that if the emergency ever confronted the country we would call out an additional army of at least 500,000 men?

Gen. LITTELL. But we did not know we were going to have to build those cantonments in three months. It would have been entirely different in the matter of building those cantonments if we had had anywhere from 8 to 10 months in which to build them, because then you would have time to draw specifications.

Mr. ANTHONY. But you had the specifications prepared, did you not?

Gen. LITTELL. We had the plans prepared. The plans are all simple and they speak for themselves.

Mr. ANTHONY. What was the necessity for superimposing this civilian body over the bureau of constructing quartermasters? Was there any necessity for that, so far as the ability of the Army officers to carry out the work was concerned?

Gen. LITTELL. If we had had plenty of time to organize a division to do that work it probably would have been all right, but a time limit was set, and the time element was so very important that we did not have time to organize and look around to find out where to get these people.

Mr. ANTHONY. Was there anything that this Advisory Committee did that could not have been done by the Army officers?

Gen. LITTELL. No, sir; if we had had plenty of time.

Mr. ANTHONY. You had just as competent men as they had to do that work, did you not?

Gen. LITTELL. Possibly so; but we only had three there, myself, Maj. Marshall, and Maj. Oury.

Mr. ANTHONY. Three constructing quartermasters?

Maj. OURY. Three officers in that division.

Mr. ANTHONY. There are a large number of constructing quartermasters, are there not?

Gen. LITTELL. They are all over the United States, doing certain kinds of work, but they were not men who had any experience in doing anything of this kind.

Mr. ANTHONY. Was the board appointed to take over this work given supreme authority?

Gen. LITTELL. No, sir.

Mr. ANTHONY. You still had the right to change their plans?

Gen. LITTELL. Yes, sir. They were only acting in an advisory capacity.

Mr. ANTHONY. Was there ever any recommendation from that civilian board which you changed or failed to follow?

Gen. LITTELL. In the case of one of the contracts—I have forgotten whether it was one or two—the board made a recommendation which we did not agree to, and I called the attention of the Secretary of War to my opinion about it, and he referred it back to the board and they changed the recommendation.

Mr. ANTHONY. In the construction of these large cantonments, for the National Army, costing these immense sums of money, did not that construction go further than the plans which were in the mind of the Quartermaster Department officials; were they not more elaborate?

Gen. LITTELL. Yes, sir; they were.

Mr. ANTHONY. Do not military men, as a general rule, believe that an army should be simply housed, rather than extravagantly housed, with all modern luxuries and improvements?

Gen. LITTELL. After my experience with these cantonments, I should say no, because what they have there now, they practically demand, those who are on the spot. The buildings we have built them are not elaborate buildings. They are as simple as can be made to make them comfortable and healthy.

Mr. ANTHONY. Would it not have been much cheaper to have housed the National Army in smaller units and not have made these military cities so large?

Gen. LITTELL. I do not think so.

Mr. ANTHONY. You stated the other day that it cost \$220 per man to house these men.

Gen. LITTELL. Yes, sir.

Mr. ANTHONY. I have in mind some of the smaller military camps which have been built under the system of competitive bidding, and not on the cost-plus basis, wherein such as the men who are in some of the technical corps of the Army are being housed at a cost of about \$70 per man. They are one-story barracks, heated by stoves, in the old-fashioned way, but the men are perfectly comfortable, and the officers say that the camps are perfectly satisfactory. Does not the difference in cost between \$70 and \$220 show a big waste of money in housing the men of the National Army?

Gen. LITTELL. You must remember that in the units you are speaking of, they are not including in that cost the sewers and the steam heat, and in some cases they are not including the post exchanges, and a lot of stables, and the remount station, and they are not including the grain elevators, and the scales, nor hospitals, nor brigade headquarters, nor division headquarters, nor barracks for foreign officers, and a thousand and one other things, such as truck train garages, and all that sort of thing.

Mr. ANTHONY. But is it not extravagance to construct barracks for the larger units? I have before me a copy of the hearings held by the Committee on Naval Affairs, which shows that in the construction of the smaller camps by the Navy, where they housed from 1,500 to 4,000 men, the cost would run from \$40 to \$100 a man, and in the larger camps it would run to almost as much as the cost for Army. Does it not appear to you that a great deal could have been saved by building smaller camps?

Gen. LITTELL. No, I do not think so, if you provide them with all the utilities they have demanded, such as water and sewers, and hot water for bathing, electric lights, laundries, post exchanges, theaters, and all sorts of things of that kind.

Mr. ANTHONY. One of the things I have noticed at the large camps has been steam pipes running above ground. Is that considered good engineering to heat the camp in that way, with the pipes running above the ground?

Gen. LITTELL. That was done for two reasons, and it was done on the recommendation of some of the best steam heating engineers we have in the country.

Mr. ANTHONY. What were their reasons?

Gen. LITTELL. First, to save the additional cost of digging the necessary trenches. We had to dig in each camp about 52 miles of trenches for water and sewers. If we had had to have done the same thing for the steam-heating pipes, it would have added very largely to the cost of the camp, and when the pipes go in the ground it is much more trouble to take care of them, and it is just as easy to insulate them above the ground as it is under the ground.

Mr. ANTHONY. Is there not a great loss of heat?

Gen. LITTELL. Not if it is properly insulated. The air around the pipe, if the pipe is properly insulated, will not draw away any more heat than the ground around the pipe.

Mr. ANTHONY. Have you heard that the use of steam heat has been one of the causes of illness in the camps?

Gen. LITTELL. I do not think the records will show that.

Mr. ANTHONY. I had an officer make this statement to me, that the buildings were overheated when the weather was not cold, and when the weather was cold they were not sufficiently heated, and that the men would be taken out to drill and practice and brought back to the cold buildings in a heated condition, and for that reason the buildings were not sanitary and healthy.

Gen. LITTELL. There is a great deal of that. We have the same thing in our own lives. We are always catching cold because our houses are overheated, and that is always the trouble with the modern improvements.

Mr. ANTHONY. You spoke of some of the camps having cost as much as \$10,000,000. Which of the camps cost that amount?

Gen. LITTELL. There is one camp that cost a little more than that. I think that was the camp at Yaphank.

Mr. ANTHONY. What was your original estimate of the cost of that camp?

Gen. LITTELL. It is hardly fair to compare that cost with our original estimates, because we have done so very much more construction since the original estimate was made. We never made an original estimate on all that we have constructed, but as I have stated before, every single week there is some new construction work in each of these camps.

Mr. ANTHONY. Here is a statement which I have before me that was made to a Member of Congress by the general engineer of one of these construction companies. He stated that his original estimate of the construction was \$3,000,000 for the camp, and that the final cost ran up to \$8,000,000. What are the causes of such a wide margin between the estimated cost and the actual cost?

Gen. LITTELL. In some cases we have to pay more for the materials because of the delay in the materials getting there, and the means of getting it there in time to carry on the construction, and we had to buy some of those materials in the open market.

Then our labor cost would be so much more than we had expected by reason of the higher rates we had to pay and the amount of overtime that we had, of necessity, to work in order to get the camps finished for the troops on the dates when we were ordered to take

care of them. That large amount of construction we did not contemplate in the beginning.

Mr. ANTHONY. The profit was limited on this first award of \$3,000,000 to \$250,000, as I understand it.

Gen. LITTELL. Yes, sir.

Mr. ANTHONY. As the contractor completed his job, as it was awarded to him, and this supplemental work was given to him would he get an additional profit on that supplemental work.

Gen. LITTELL. No, sir. That is the reason the average profit is only between 2 and 3 per cent.

Mr. ANTHONY. The reason I asked that is that a Member of Congress has stated before another committee that in some of the Army camps, after the contractor completed his original job as allotted to him, he was given the job of building roads leading up to the camp, and in the camp, which amounted to large sums of money, on which he was given a profit.

Gen. LITTELL. No, sir.

Mr. ANTHONY. That statement is not correct?

Gen. LITTELL. No, sir.

Mr. ANTHONY. Do you believe this work could have been done by letting it out to the lowest bidder?

Gen. LITTELL. No, sir; I do not. I do not think you could get enough reliable bids, or enough bids from reliable contractors to have built half of the cantonments.

Mr. ANTHONY. I understand that the Navy did \$97,000,000 of emergency work of this character, and that they let the bids to the lowest bidder.

Gen. LITTELL. Have they had to do that within a time limit?

Mr. ANTHONY. I do not know. Do you know?

Gen. LITTELL. I have heard that they have not, but I do not know.

Mr. ANTHONY. I want to ask you in regard to the wages paid at these places. It has come to my knowledge that at some of the large Army camps, where the contract was on the cost-plus basis, a plumber would get as much as \$10 or \$12 or \$13 a day. In towns within a hundred miles of the cantonment plumbers were working at the normal rate of \$5 a day.

Gen. LITTELL. How many hours a day were they working?

Mr. ANTHONY. I do not know as to that.

Gen. LITTELL. Was there any double time?

Mr. LUNN. I would like to suggest that a short time ago the plumbers of Schenectady, N. Y., were drawing \$10 a day for eight hours' work.

Mr. ANTHONY. This was in the West.

Mr. KAHN. In the building of Camp Fremont they had to go to San Francisco for plumbers, and they had to take the men away from their families and take them to Camp Fremont, and they were also under the expense of keeping up their homes in San Francisco, so that there was also an additional expense if the men got the additional pay.

Mr. ANTHONY. That is true, but how do you account for the fact that where your contractors were building one of these cantonments, and carpenters were being paid 88 cents an hour off 100 miles away, a contractor who, having secured a contract for the military work by reason of being the lowest bidder under the competitive

system, was paying the union rate of 55 cents an hour for carpenter's work. Do you not think that is an example of extravagance under the cost-plus system?

Gen. LITTELL. Were they paying 88 cents an hour?

Mr. ANTHONY. That is my understanding.

Gen. LITTELL. I could not say about that.

Mr. ANTHONY. In this place where they were paying 55 cents an hour, as soon as it was known that the Government was going to do additional work, and the contractors who were doing the work received orders to go ahead on the cost-plus basis, the carpenters raised their price to 85 cents.

Gen. LITTELL. That matter of wages was regulated for us.

Mr. ANTHONY. In other words, under the cost-plus system, the labor proposition got away from you, did it not? You had no means of controlling it?

Gen. LITTELL. We had no means; no, sir.

Mr. ANTHONY. Whereas, if the work had been let to the lowest competitive bidder, the contractors would have made contracts with the union?

Gen. LITTELL. But the great majority of reliable contractors who could have done that work in the time it was required to be done, would not make a bid, knowing the trouble about labor.

Mr. ANTHONY. Under the cost-plus system you can control the price of raw materials, and you can control everything except the price of labor?

Gen. LITTELL. And no one else can. You will find in Pittsburgh that there are men getting from \$24 to \$30 a day in the mills and boys getting \$7 and \$8 and \$10 a day—by that I mean young men. A boilermaker's helper will get \$4 a day now, and he has nothing to do but hold a rivet and let somebody handle the other end of it.

Mr. ANTHONY. Would it be possible to put in the hearings the names of the Army camps, where the sites were changed after the original recommendations were made by the boards of officers appointed by the department commanders to select the sites?

Gen. LITTELL. I could not do that, because I do not know which ones were changed.

Mr. KAHN. Under whose jurisdiction would that be?

Gen. LITTELL. The Chief of Staff. Those probably are all on record in the Adjutant General's Office.

Mr. KAHN. Did I understand you to say that in February or March you began to make arrangements for these camps?

Gen. LITTELL. Not for these camps.

Mr. KAHN. Or for some similar camps for housing large armies?

Gen. LITTELL. We did not know, Mr. Kahn, what it was for. There was a great deal of talk at that time about national training, and the Quartermaster General got instructions from the War Department to prepare estimates for housing in cantonments a million and some few thousand men.

Mr. KAHN. Will you please put into the record the exact date when the Quartermaster General got that order, and from whom he got it?

Gen. LITTELL. Yes, sir; I can get that from the records.

NOTE.—This has been inserted in previous pages of the record.

Mr. KAHN. In regard to these large cities that Mr. Anthony refers to, the overhead expenses of maintaining the camps is materially reduced when they take in as large an area and house as many people, as compared to the small camps, is it not?

Gen. LITTELL. Yes, sir. If these camps should be divided—say, we could take one of these division camps and divide it into three brigade camps, each one of them would have to have the electric light, a sewage disposal plant, perhaps water purification, and all sorts of things of that kind, which would be a duplication.

Mr. KAHN. And would add materially to the expense?

Gen. LITTELL. There is no doubt about that.

Mr. KAHN. Which expense is avoided when these large camps are constructed?

Gen. LITTELL. It is much reduced.

Mr. GORDON. Not avoided; it is lessened proportionately, according to the number of men.

Gen. LITTELL. It would not be cut in half, but it is materially less.

Mr. KAHN. I want to ask you another thing about the construction of these camps. As I understand it, you entered into these agreements with these large contractors because they were able to turn over to the Government immediately their whole construction camps, and they did turn them over, and the smaller private contractors would not have been able to do that?

Gen. LITTELL. That was the idea, Mr. Kahn. They had large organizations which were used to doing large things, and it was conceded by everybody; in fact, we have a letter on file by some very prominent man here who told us it would be practically impossible to get those camps done, that it was an unheard of thing to build anything of that kind within that time, and I do not think we thought we were going to get them done, but we used every possible effort to do it.

Mr. KAHN. Did those contractors deliver the goods, as the saying is? Did they turn over these plants to you so that you could immediately begin the construction?

Gen. LITTELL. They did, and we considered that they did not profiteer any more than anyone else. There was no more profiteering by the contractors' side of it than the laborers' side of it.

Mr. ANTHONY. If you turned the Treasury over to individuals, it is possible to do almost anything, is it not?

Gen. LITTELL. Yes, it is; but it takes a good many things all taken together to do things like that in record time. If you cut down the time one-half in the building of a piece of road, or anything else, it is going to cost nearly twice as much money. You have got to employ so many more men, and your other expenses are greater.

Mr. KAHN. The Quartermaster General's department felt, and the country felt, I imagine, that we were at war, and that we had to provide these cantonments as speedily as possible so as to complete the armies to fight our battles, and the question of cost was not looked into as seriously as it would be in peace times.

Gen. LITTELL. The cost in most cases could not be considered. The work had to be done, and the only function we could exercise was to do what we could to keep it down as low as possible.

Mr. KAHN. You tried to do that?

Gen. LITTELL. Yes, sir.

Mr. McKENZIE. There was no effort made to keep the price of labor down, and is it not a fact that the price of labor was put high purposely in order that it would attract mechanics from all over the country to these places, so that they could get the men to do the work?

Gen. LITTELL. I do not know whether it was put up purposely or not, but we were ordered to pay the union scale of wages in each particular locality, and an agreement was made between the Secretary of War and Mr. Gompers that we would pay the union scale of wages in existence in the neighborhood on the 1st of June.

Mr. McKENZIE. But you did pay more than the union scale of wages, did you not?

Gen. LITTELL. Not that I know of. We would not allow that if we knew of any case where it was done.

Mr. McKENZIE. I have always understood that the price of labor was put up high for a purpose, and, of course, I approved of that purpose, if it was to get the men there to do this work. Suppose you had put the price of labor a little below the average union price over the country; you could not have gotten the men, could you?

Gen. LITTELL. The cantonments would not have been half done by this time.

Mr. McKENZIE. The idea was to attract men from all over the country, so that you could get this work done, otherwise you would not have gotten it done?

Gen. LITTELL. We tried in every possible way not to take the men away from other sources. At Camp Meade, a mill owner said that his men were leaving him and going to work at the camp and making more money than they made in his mill. We at once instructed the constructing quartermaster not to take any men on that came from that mill.

Mr. McKENZIE. What was this gentleman making in his mill?

Gen. LITTELL. I think he was making woolen goods or worsted.

Mr. McKENZIE. That was an industry necessary for the carrying on of the war?

Gen. LITTELL. My recollection is that it was a worsted mill.

Mr. McKENZIE. If he was just engaged in some ordinary business of manufacturing, I think you made a mistake in giving that order.

Gen. LITTELL. That was a man whom I think was making something for the Army. I do not remember whether it was cotton duck or woolen yarn.

Mr. CALDWELL. You said a few moments ago that some of the recommendations which were made by this Board or Committee of the Council of National Defense you did not approve of, and you took it up with the Secretary of War, who ordered it referred back to the board, and they changed their recommendations?

Gen. LITTELL. Yes, sir.

Mr. CALDWELL. What was the nature of the recommendations that they had made?

Gen. LITTELL. I do not mind telling you at all. It is nothing to the detriment of the board or to the contractor we had selected. The board was absolutely honest in its recommendation, and the contractor was a good one. They recommended a contracting firm, one of whose members was a member of the Advisory Board. I invited the attention of the Secretary of War to that fact, and also

stated that it might be better policy, and would avoid any possible criticism of the board or ourselves, if that firm was not given the contract, and the case was referred back to the Advisory Committee with that intimation, and they changed their recommendation.

Mr. CALDWELL. Would you have followed that far enough to recommend not giving a contract to the brother of one of the members of the board?

Gen. LITTELL. Not unless I knew that the brother of that contractor was in some way connected with the other brother, and that he was in some way interested. The fact that he happens to be a brother of a member of the firm, and the firm being a most excellent one, would not influence me in making any recommendation that they should not get the contract on that account.

Mr. CALDWELL. I do not say that I agree with the criticism, but I will say that I have heard quite a little criticism of the fact that some contractors who actually got these heavy contracts for the big cantonments were related to one member of the board. For instance, I understand that one of the firms that got a contract was organized by one of the brothers, and another one of the firms that got a contract was practically controlled by one of the brothers, and another one of the firms that got a contract was an offshoot of one of these firms. You know whom I refer to?

Gen. LITTELL. Yes, sir. The firm that bears the name of this member of the board was organized by the father of these men, the one who is on the board and one who is in another concern, not that one. I understand that at one time both of the brothers were interested in this firm, but I have since ascertained that neither of them is now interested in the original firm, and that the brother has gone off and is a partner in another firm not bearing that name at all.

Mr. CALDWELL. Which now has one of the contracts?

Gen. LITTELL. Which now has one of the contracts, but the brother who is on the committee has nothing to do with either of them.

Mr. CALDWELL. In order to get our attention down to it, I understand that a certain corporation was an offshoot of those same concerns?

Gen. LITTELL. I do not know about that.

Mr. ANTHONY. I know the facts about that. I will state them for your information, because I presented the matter to that committee. Mr. Clough was for 14 years vice president of the Fuller Construction Co., and over a year previous to this proposition he severed his connection with the first company and organized the Clough-Bourine Corporation. The advisory committee had made a ruling that no corporation should take one of these contracts unless they had been in business for two years, and that shut out this corporation, which had considerable money and experience behind it. The committee afterwards reconsidered that rule and decided that as they were a separate company, and had ample previous experience, and were absolutely separated from the Fuller Co. there was no reason why that two years' limitation should apply against them, and they were given the work.

Gen. LITTELL. I might further say that the Secretary of War carefully investigated the relations existing between the member of the committee and this firm that bore his name, and his proposed

connection with the other firms as well as the connection with the other gentleman who was a member of the board, and the Secretary of War had a statement, which is, of course, practically a statement on honor from this member I referred to who is on the board, as to his exact relations.

Mr. CALDWELL. At the Yaphank cantonment, General—I was there quite a number of times—I noticed that when the work was first begun, the first thing they did was to chop a road through the underbrush that was there, and began driving over it after they had made a slight crown to the road. It was demonstrated in the beginning that the top soil there would not make a good road. Why was it that that work was continued for all those months with the enormous amount of hauling going on over those roads without making a good road?

Gen. LITTELL. Our original intention was to make a contract to get the road started, and if possible get the road so far completed that it could be used in connection with the construction work, and we did actually go to work making a contract for the construction of the roads. We picked out what we considered to be one of the largest road-construction road outfits in the United States and made a contract with them, and there was great pressure brought to bear to have that contract annulled so that the work could be given to the local people at the various camps. That was under consideration for some time, and that held up that part of the work for a long time, until the Secretary of War could hear both sides of the case and make his decision, and he finally decided to abrogate the contract. Then we had to make new contracts for each of the various camps for the construction of the roads.

Mr. CALDWELL. Was that pressure brought to bear by any Member of Congress?

Gen. LITTELL. I do not know, sir.

Mr. CALDWELL. There is one other thing that struck me down there. The scrub oak that covered the whole of that country was very small, and the largest tree that was there, on an average, I should say, was about the size of the calf of my leg; we will say about four inches in diameter. The roots of those trees, as demonstrated by the uprooting of them, spread through the surface of the soil, rather than growing down. Why did you not use a stump puller and pull those out, rather than cut them off and grub them out?

Gen. LITTELL. It was discovered that the roots from which the scrub oak grew were the stumps of big trees.

Mr. CALDWELL. Only in places.

Gen. LITTELL. I do not know how much of it there was.

Mr. CALDWELL. Possibly 1 out of 100. I have been there.

Gen. LITTELL. I saw the condition of the ground, and what they had to do, and Gen. Bell, who is a great man to clear ground, was very anxious to do the best he could on that ground, and therefore he urged the Secretary of War to allow him a certain sum of money to do the clearing with, and he took an Engineer contingent that was there, an Engineer regiment to pulling up the stumps. I understand they hooked on a traction engine and pulled them out.

Mr. CALDWELL. The point I want to know is if you pull the stumps out, why do you not pull the tree down, because the stumps were pulled out, and only a few days after the tree was cut over?

Gen. LITTELL. They probably did not know big stumps were under there, and they originally cut off the scrub, just to provide places for the buildings to be erected, and when they came to find it was necessary to clear off a lot of that scrub to provide drill grounds, they found all these big stumps there, and some provision had to be made for getting them out. We did not have the money to pay for pulling out those stumps, when we first started.

Mr. FIELDS. The traction engine pulled the stumps out, did it?

Gen. LITTELL. I understand they were very successful with that.

Mr. FIELDS. Then, if the force of the engine was sufficient to pull out the stump, it only stands to reason that it was easier to handle the stump of a tree rather than to handle the whole tree.

Gen. LITTELL. They did not think at first that it was necessary to pull out the big stumps, but then they found out later that the ground was unserviceable without taking out the stumps.

Mr. McKENZIE. I think you have stated that where there were a number of bidders for the construction of one of the cantonments, the Secretary of War arbitrarily decided which one of the bidders should get the contract. Is that true?

Gen. LITTELL. No, sir; we did not call for bids.

Mr. McKENZIE. I did not mean bids. There were a number of different firms undertaking to get the job of constructing these cantonments, such as the one you have spoken of, and then it was up to the Secretary of War to determine, after ascertaining all the facts as to their ability to perform the work, to decide which one of these firms should have the contract. Is that correct?

Gen. LITTELL. This is the way it was done: We notify the committee of the Council of National Defense that we are going to do some construction work at such and such a place and request their advice as to the selection of a contractor. They make a recommendation, which they send to the Council of National Defense, and it is acted on by them and approved or disapproved and sent back to the Quartermaster General's Department, and then it is sent from there to the Secretary of War with a recommendation that it be either approved or disapproved, and the Secretary of War makes a final decision. There have been some cases where it has become known before the papers got to the Secretary of War that such and such a contractor has been recommended, and then other contractors, or their representatives or their friends have gone to the Secretary of War and asked a suspension of that recommendation or asked him to reconsider.

Mr. McKENZIE. If there were no unusual characteristics appearing about this proposition, the recommendation of the board would go through?

Gen. LITTELL. Yes, sir.

Mr. McKENZIE. The reason I ask these questions is because of some criticism I heard in regard to the letting out of the work at Camp Grant, at Rockford, Ill. I understand that that work was given to a firm of contractors at Cleveland, Ohio, and that a number of very large Chicago firms who were interested in building had made an effort to get that job of work, but were turned down, and the contract was given to this firm of contractors from Cleveland, whom it was stated were railroad construction men. I do not know any-

thing about the facts, and I would be glad if it could be shown that nothing but that which was right was done in that matter.

Gen. LITTELL: Bates & Rogers were the construction people. I think they are Chicago people.

Mr. McKENZIE. I do not know. I heard that statement made at the time.

Mr. GORDON. I do not know of any such firm of contractors in Cleveland. Do you know what their address is?

Gen. LITTELL. I can find out. I do not happen to have it in this table.

Mr. McKENZIE. The point I was trying to get at was whether a firm located in Chicago would be disqualified because of their being located in Chicago.

Gen. LITTELL. I think this is a Chicago firm.

Mr. McKENZIE. I am glad to know that.

Mr. GORDON. There are many things about this work that have been criticized, and a good deal of the criticism, in many instances, has no foundation in fact. That is possibly what has led to so many questions being asked here.

Gen. LITTELL. I would like to state an instance that came to me the other day. A Congressman stated to me that he wanted to get information. He stated that another Congressman who had just returned from one of these camps had been told by a man who he said was superintendent on the job that he was getting \$50 a day, and this Congressman asked me if that could be so, if the contractor was getting his 10 per cent on that man's salary. I told him that in the first place the contractor was not getting 10 per cent and that in the second place that man was not getting \$50 a day on our pay roll.

I got the man's name and the contractor's name and ascertained that the man was getting \$25 a day and that the contractor was paying him \$25 a day out of his pocket, so that the man was really getting \$50 a day. But the contractor considered that man so valuable that he was being paid \$50 a day. There are superintendents on some of these jobs that are getting \$15,000 a year, but we are not paying them that salary. They are getting a bonus and the contractor divides his profit with them.

Mr. GORDON. In what capacity was this man employed?

Gen. LITTELL. As general superintendent.

Mr. GORDON. Is it proper for a man to receive pay from both parties to a contract?

Gen. LITTELL. We can not stop a contractor from paying him anything he pleases.

Mr. GORDON. I would not think if the Government had a man on a piece of work as superintendent of construction—

Gen. LITTELL. This was a contractor's man.

Mr. GORDON. I understand that, but the Government pays him, you say, \$25 a day, and the contractor pays him out of his own pocket \$25 a day extra.

Gen. LITTELL. That is because he wants a man who will get the work done.

Mr. GORDON. Then he wants a man who will not kick on the kind of work he does. What is the purpose of the Government paying \$25 for that?

Gen. LITTELL. He is entirely a contractor's man.

Mr. GORDON. Why should the Government pay him at all?

Gen. LITTELL. We have to pay everybody on the job, under the cost plus contracts.

Mr. ANTHONY. Was not the contractor supposed to furnish his organization free?

Gen. LITTELL. No, sir.

Mr. ANTHONY. I thought in some of the contracts it was supposed that he would furnish his regular organization free.

Gen. LITTELL. That is his company organization. We do not pay the overhead charges. His company only pays the people who are right on the ground.

Mr. ANTHONY. What is your rule with reference to subcontractors, where you designate the contractor and he sublets some of the work? Would he get a profit on that subcontractor's work?

Gen. LITTELL. Yes, sir; he gets five per cent.

Mr. ANTHONY. And the subcontractor would get 5 per cent?

Gen. LITTELL. No; he just gets the amount of his contract.

Mr. ANTHONY. Would he let the subcontract on the cost-plus basis, or on the competitive basis?

Gen. LITTELL. He makes the contract for a certain sum.

Mr. ANTHONY. On a competitive basis?

Gen. LITTELL. No; just on the cost-plus basis.

Mr. LUNN. The chief contractor gets 5 per cent of the subcontractor's work?

Gen. LITTELL. Yes, sir; that is the usual custom.

Mr. LUNN. He gets a percentage on the whole contract, does he not?

Gen. LITTELL. Yes, sir.

Mr. LUNN. And then he lets out certain parts of it and gets an additional percentage on that?

Gen. LITTELL. Not to exceed \$250,000, in any event. That is all limited. That is the ordinary course of procedure under contracts.

Mr. SHALLENBERGER. We have had testimony as to how these cantonments were prepared, and we have had some discussion as to how the National Guard has been cared for. How have you housed and taken care of the Regular Army?

Gen. LITTELL. Many of them have been in camps and cantonments all along the Mexican border, and many of them are in the regular barracks, and in many cases where garrison accommodations in the way of barracks were not sufficient to take care of the expanded companies, we have built cantonment buildings right at the posts.

Mr. SHALLENBERGER. The point I have in mind is this: I have heard less complaint about the housing of the Regular Army, and I think also there has been less kicking among the men in the Regular Army than in the National Guard and in the National Army cantonments. You have not given them any better care than the other branches of the Army, have you?

Gen. LITTELL. It is very natural that they should be in better condition.

Mr. SHALLENBERGER. I wanted to be sure that it was not because you had housed them better.

Gen. LITTELL. The men in the Regular Army are eliminated from contact with these large numbers of men coming in from civilian life, who always have measles. There is not a transport that goes across the ocean that does not have on board from 25 to 30 cases of measles or mumps, and that is because there are so many recruits. I am referring now to the transports that have recruits on them, because some of the Regular troops will go without any measles at all; but you put 500 recruits on a vessel and you will have from 25 to 30 cases of measles or mumps. We are continually having that trouble at the recruiting rendezvous.

Mr. SHALLENBERGER. I have heard one or two of the gentlemen say that the National Guard was given second consideration, and has been without many of the things that the men in the National Army have had. In other words, that the National Army has been given a great deal more attention than the other branches of the service. Is there anything in that, because of the fact that the Regular Army and the National Guard, being men who voluntarily have gone into the service, are not as apt to complain and accept a soldier's fare better than the men who have been conscripted and who have had to go?

Gen. LITTELL. I do not think those who have been conscripted do that after they have been there for a week or two. I heard one man say if he had known it was so good he would have been there three months before.

Wage schedule.
NATIONAL ARMY CANTONMENTS.

[In cents.]

	Ayer.	Yap- bank.	Ad- miral.	Peters- burg.	Colum- bia.	At- lanta.	Little Rock.	Chilli- cothe.	Louis- ville.	Battle Creek.	Rock- ford.	Des Moines.	Fort Riley.	Fort Sam- Hous- ton.	Ameri- can Lake.
Labor:															
Common.	37½	37½	30-35- 40	25	17½	15-30	25-30- 25-30	30-40	30	35	35	33½-35- 40	37½		
Foreman			40-50-60	50	35	40-65				45	40	50-58	50		75-82½
Carpenter	60-65	62½	62½	57	40	35-50	60-65	60	50	60	62½	65-75	65	(*)	62½
Foreman			67½-72½	75	50	55-70				70	67½	86½	75		75-87½
Helper	37½		30	45	25	25-30				45-50		56			37½
Blacksmith	50	68½-80	50-55	57	40	35-62½	55-60				40				62½
Helper		42½	40	45	20	60-75	35	70	70	75-112	37½		85		43½
Bricklayer	75	75	75	85-75	65		87½				75	81½			93½
Helper	50			45	17½					45					112½
Cement finisher	70	70	62½	65-85	50-70		75		60	55	62½				62½-88½
Cement worker			50	30-45	20		35				40				43½-62½
Electrician	70	65		75-85	62½-77½ ⁶⁸		55	62½	45	50-67½	65-77½	50-80	68½		62½
Helper		31½	30	45-60	31½	25-35		30-40		35-50	35-42½		50		37½
Lineman		65	62½-65		40-50	40-50	50-75	55		67½	50	48-60		49-52	62½
Engineer															
Stationary	75	62½	45-50	60	35	50-60		65			75		50		62½-75
Steam shovel	83½	84½	(1)							70	(2)				
Trench machine			50		60					70	(3 4)				
Rock driller						25-40									
Clazier			62½			35-50									
Mechanic	40-62½	60	50-72½			50-62½		30-42½		80	62½				62½
Painter	62½		62½	57-75	40		55			45-55		50	65	(*)	62½
Pipelayer	45	50	62½-65		30	30-40			50	50	40				62½
Sewer foreman			(*)								50				
Timberman			50-60												50
Plasterer					50	55-60	75-81½		70						87½
Plumber	68½-70	75	62½	68½	68½	68½-75	62½-70	62½-70	60-67½	75-81½	75	68½-81½	75	75	75-81½
Foreman		80	75	87½	(1)	112½				81½-90	(7)	80-90			240½
Helper		37½	30	45	31½	25-35	35	35		45	37½				37½
Sheet-metal worker	70½	62½					60-62½					67½-66½			
Foreman			75									65-74			
Steam fitter	78	75	62½	57-60	68½	40-60	68½-75	62½-75	55-60- 67	75-81½	75	68½-81½	75	75	81½
Foreman															
Helper	48	75	93½			112½		35	50	81½-90			37½	(*)	62½-106½
		42½	31½							45	37½				62½

1 \$200 a month.
2 \$175 a month.

3 \$36 a week.
4 \$21 a week.

5 \$4 a day.
6 \$250 a month and board.

7 76 cents an hour plus \$1 a day.
8 \$4-85 a day.

9 \$4.35 a day.

NATIONAL GUARD CAMPS.

[In cents.]

	Palo Alto. ¹	Linda Vista.	Deming.	Fort Sill.	Fort Worth.	Waco.	Houston.	Annis-ton.	Mont-gomery.	Augus-ta.	Green-ville.	Spartans-burg.	Char-lotte.	Hatties-burg.	Alexan-dria.
Labor:															
Common		30-32½	25	35	25	20-25	25	20	20	17½-19	17½-20	17½-20	25	17½	20
Foreman	4		45-50	(*)	35		45-50		40-50	30-45				60-75	40-50
Carpenter	5½-6	45-50	75	60	67½	62½	62½	40-50-40	30-45	35-45	40	30-35	50	30-50	50-60
Foreman	6½-7		87½	(*)	82½		75		50-75					85-115	60-70
Helper		42			30						25			40-60	30
Blacksmith		50			68½						45				
Helper		42½			30-35										
Bricklayer	8-8½	75	100-87½		100-75	87½	87½		60		50			60-75	75-87½
Helper	7-7½	37½			68½-75		62½-75								60
Cement finisher	6½	62½			40						40				
Cement worker	4½	42½									20		25		
Electrician	7	55	75-87½	(*)	81½-88½	70	65½-65½	87½	45		40	35-40	55		65-75
Helper	6				38	70	32½	45			20	25-27½			50-65
Lineman							50	60				45-50			
Engineer:															
Stationary	6	60-62½					62½								50
Steam shovel					93½										
Trench machine															
Rock driller		50													
Glazier															
Mechanic		60	60-75		68½										
Painter	5	55	62½		56½						50				
Pipelayer	3½	45													40
Sewer foreman															
Timberman															
Plasterer	6½	75		75	100-87½	87½	87				40				75
Plumber	7½			100	81½	70	75		62½-70		35-50		62½		
Foreman			87½		93½										
Helper		37½	43½		30								31½		
Sheet metal worker													50	50-75	
Foreman															
Steam fitter		50					57						62½		
Foreman							70								
Helper		37½					33½-40						31½		

¹ Dollars per day.

² \$5 a day.

³ \$8 a day.

⁴ 75 cents an hour or \$10 a day.

NATIONAL ARMY CANTONMENTS.

Number of troops for which facilities had been provided on Sept. 4, 1917.

National Army Camps:	
American Lake, Wash., Camp Lewis.....	46,000
Annapolis Junction, Md., Camp Meade.....	15,000
Atlanta, Ga., Camp Gordon.....	14,000
Ayer, Mass., Camp Devens.....	16,458
Battle Creek, Mich., Camp Custer.....	10,000
Chillicothe, Ohio, Camp Sherman.....	13,800
Columbia, S. C., Camp Jackson.....	12,500
Des Moines, Ia., Camp Dodge.....	15,000
Fort Riley, Kans., Camp Funston.....	22,800
Fort Sam Houston, Tex., Camp Travis.....	28,000
Little Rock, Ark., Camp Pike.....	20,000
Louisville, Ky., Camp Taylor.....	24,000
Petersburg, Va., Camp Lee.....	18,750
Rockford, Ill., Camp Grant.....	14,000
Wrightstown, N. J., Camp Dix.....	10,000
Yaphank, L. I., Camp Upton.....	7,000
Total.....	287,308

HOUSING CAPACITY OF THE VARIOUS MILITARY ESTABLISHMENTS IN THE UNITED STATES.

Total capacity of all camps, posts, cantonments, and arsenals.

RECAPITULATION.

Name.	Commis- sioned officers.	Noncom- missioned officers.	Men.	Total.
National Army camps.....	22,465	6	632,321	654,786
National Guard camps.....			438,042	438,042
Coast Artillery posts.....	749	609	20,706	22,064
Coast Artillery cantonments.....				19,599
Regular Army posts.....	1,987	587	42,574	45,148
Regular Army cantonments.....				55,886
Embarkation camps.....			54,774	54,774
Quartermaster camps.....				17,800
Officers' training camps.....				13,500
Other training camps.....				5,690
Aviation training camps and concentration camps.....	1,963		36,050	38,013
Arsenals.....			1,510	1,510
Total.....	27,164	1,196	1,128,629	1,347,622
Abandoned mobile Army posts.....	201	73	4,007	4,281

Depots:	
Square feet.....	5,399,980
Cubic feet.....	11,134,424
Animals.....	1,686
Recruit depots.....	28,792

Hospitals:	
	Beds.
Mobile Army posts.....	4,161
Coast Artillery posts.....	850
National Army cantonments.....	24,570
National Guard camps.....	15,295
Miscellaneous.....	6,219

CAPACITY OF NATIONAL ARMY CAMPS.

Name of camp.	Officers.	Men.	Total.
Devens, Mass.....	1,285	34,053	35,288
Upton, Yaphank, L. I.....	1,427	39,486	40,913
Dix, Wrightstown, N. J.....	1,348	39,963	41,309
Meade, Annapolis Junction, Md.....	1,416	39,893	41,309
Lee, Petersburg, Va.....	1,490	44,022	45,512
Jackson, Columbia, S. C.....	1,501	40,997	42,498
Gordon, Atlanta, Ga.....	1,411	38,385	39,796
Sherman, Chillicothe, Ohio.....	1,313	37,080	38,393
Taylor, Louisville, Ky.....	1,497	42,442	43,939
Custer, Battle Creek, Mich.....	1,186	32,859	34,045
Grant, Rockford, Ill.....	1,462	39,847	41,309
Pike, Little Rock, Ark.....	1,461	40,886	42,347
Dodge, Des Moines, Iowa.....	1,386	39,140	40,526
Funston, Fort Riley, Kans.....	1,402	40,162	41,564
Travis, Fort Sam Houston, Tex.....	1,428	39,925	41,353
Lewis, American Lake, Wash.....	1,504	43,181	44,685
Total.....	22,465	632,321	654,786

CAPACITY OF NATIONAL GUARD CAMPS.

Camp Beauregard, Alexandria, La.....	27,152
Camp McClellan, Anniston, Ala.....	27,152
Camp Hancock, Augusta, Ga.....	27,152
Camp Greene, Charlotte, N. C.....	27,152
Camp Cody, Deming, N. Mex.....	27,152
Camp Donniphan, Fort Sill, Okla.....	27,152
Camp Bowie, Fort Worth, Tex.....	27,152
Camp Sevier, Greenville, S. C.....	27,152
Camp Shelby, Hattiesburg, Miss.....	30,762
Camp Logan, Houston, Tex.....	27,152
Camp Kearney, Linda Vista, Cal.....	27,152
Camp Wheeler, Macon, Ga.....	27,152
Camp Sheridan, Montgomery, Ala.....	27,152
Camp Freemont, Palo Alto, Cal.....	27,152
Camp Wadsworth, Spartanburg, S. C.....	27,152
Camp McArthur, Waco, Tex.....	27,152
Total.....	438,042

Capacity of Coast Artillery forces.

[Permanent construction.]

Name of fort.	Commis- sioned officers.	Noncom- missioned officers.	Men.	Total.
Adams, R. I.....	18	22	762	802
Andrews, Mass.....	13	14	488	515
Armistead, Md.....			18	18
Baker, Cal.....	11	11	461	483
Banks, Mass.....	8	9	258	275
Barrancas, Fla.....	22	12	453	487
Barry, Cal.....	7	5	270	282
Canby, Wash.....			15	15
Carroll, Md.....			16	16
Casey, Wash.....	11	12	336	359
Caswell, N. C.....	12	8	315	335
Columbia, Wash.....	4	5	100	109
Constitution, N. H.....	3	3	85	91
Crockett, Tex.....	9	8	228	245
Dade, Fla.....	7	12	218	237
Delaware, Del.....	2		109	111
De Sota, Fla.....	4	4	109	117
Du Pont, Del.....	16	15	545	576
Flagler, Wash.....	13	7	273	293
Foster, Me.....			5	5
Fremont, S. C.....			115	115
Gaines, Ala.....	2	2	109	113
Getty, R. I.....			10	10
Greble, R. I.....	8	12	309	329

Capacity of Coast Artillery forces—Continued.

Name of fort.	Commis- sioned officers.	Noncom- missioned officers.	Men.	Total.
Hamilton, N. Y.....	30	15	584	629
Hancock, N. J.....	22	17	654	693
Heath, Mass.....			12	12
H. C. Wright, N. Y.....	22	19	704	745
Howard, Md.....	15	12	436	463
Hunt, Md.....	4	6	91	101
Jackson Barracks, La.....	11	6	334	351
Jackson, La.....		2	10	12
Key West Barracks, Fla.....	13	7	137	157
Levett, Me.....	5	5	109	119
Mansfield, R. I.....	4	5	130	139
McHenry, Md.....	10	8	230	248
McKinley, Me.....	20	17	793	830
McRee, Fla.....		2	9	11
Michie, N. Y.....	5	2	139	146
Miley, Cal.....	8	7	218	233
Monroe, Va.....	118	52	1,218	1,388
Morgan, Ala.....	12	15	436	463
Mott, N. J.....	8	4	226	238
Moultrie, S. C.....	17	25	499	541
Pickens, Fla.....	3	4	177	184
Preble, Me.....	8	1	209	218
Revere, Mass.....	4	5	100	109
Redman, Mass.....	4	5	145	154
Rosecrans, Cal.....	9	9	218	236
Schuyler, N. Y.....	8	5	189	202
Screven, Ga.....	16	11	410	437
Smallwood, Md.....			20	20
Standish, Mass.....		3	30	33
Stark, N. H.....			20	20
Stevens, Oreg.....	9	15	332	356
St. Phillip, La.....	4	4	180	188
Strong, Mass.....	13	13	478	504
Sumter, S. C.....			6	6
Terry, N. Y.....	14	17	654	685
Totten, N. Y.....	32	23	894	949
Trumbull, Conn.....	8	6	60	74
Wadsworth, N. Y.....	15	13	436	464
Ward, Wash.....	4	10	109	123
Warren, Mass.....	8	14	209	231
Washington, Md.....	20	20	545	585
Wetherill, R. I.....	2	2	20	24
Williams, Me.....	20	15	617	652
Winfield Scott, Cal.....	34	14	1,440	1,488
Warden, Wash.....	20	13	682	715
Wool, Va.....			10	10
Total.....	749	609	20,706	22,064

CAPACITY OF COAST ARTILLERY CANTONMENTS.

Coast defense:	Men housed.	Coast defense—Continued.	Men housed.
Portland, Me.—		Cape Fear, Fort Caswell.....	937
Fort Preble.....	139	Charleston, Fort Moultrie....	695
Fort Williams.....	139	Key West, Fort Taylor.....	417
Boston, Mass.—		Tampa, Fort Dade.....	278
Fort Banks.....	139	Pensacola, Fort Barrancas...	278
Fort Andrews.....	139	Mobile, Fort Morgan.....	139
Bedford, Fort Rodman.....	139	Galveston, Fort Crockett.....	278
Long Island Sound—		Puget Sound—	
Fort Wright.....	556	Fort Warden.....	695
Fort Michie.....	139	Fort Casey.....	834
Fort Terry.....	834	Fort Flagler.....	695
New York—		Columbia—	
Fort Totten.....	834	Fort Columbia.....	556
Fort Schuyler.....	278	Fort Canby.....	556
Fort Tilden.....	278	Fort Stevens.....	556
Fort Hamilton.....	973	San Francisco, Fort Winfield	
Fort Wadsworth.....	973	Scott.....	1,251
Sandy Hook, Fort Hancock..	1,507	Los Angeles, Fort MacAthur..	1,390
The Delaware, Fort Dupont..	139	San Diego, Fort Rosecrans...	834
Baltimore, Fort Howard.....	417		
Chesapeake Bay, Fort Monroe	1,251	Total.....	19,599

CAPACITY OF REGULAR ARMY POSTS.

[Permanent construction.]

Name of fort.	Commis- sioned officers.	Noncom- missioned officers.	Men.	Total.
Benjamin Harrison, Ind.....	47	9	1,007	1,153
Bliss, Tex.....	44	14	868	926
Brady, Mich.....	16	5	348	369
Crook, Nebr.....	33	11	604	648
D. A. Russell, Wyo.....	146	24	3,049	5,219
Davis, Alaska.....	9	3	214	226
Des Moines, Iowa.....	45	11	1,228	1,284
Douglas, Utah.....	37	14	957	1,000
Ethan Allen, Vt.....	53	9	1,510	1,572
Geo. Wright, Wash.....	24	5	708	737
Gibbon, Alaska.....	9	4	130	143
Huachuca, Ariz.....	32	14	1,106	1,152
Jay, N. Y.....	17	9	297	323
Lawton, Wash.....	16	9	388	413
Leavenworth, Kans.....	214	36	3,854	4,014
Lincoln, Nebr.....	11	5	458	474
Liscum, Alaska.....	7	3	150	160
Logan, Colo.....	39	7	944	990
Logan H. Roots, Ark.....	15	5	260	280
McKenzie, Wyo.....	33	7	828	868
McPherson, Ga.....	44	8	862	914
Madison Barracks, N. Y.....	31	11	548	590
Meade, S. Dak.....	34	15	768	817
Missoula, Mont.....	26	7	480	513
Myer, Va.....	37	8	659	704
Niagara, N. Y.....	24	5	520	549
Oglethorpe, Ga.....	47	11	1,108	1,166
Omaha, Nebr.....	12	5	300	317
Ontario, N. Y.....	13	4	260	277
Plattsburg Barracks, N. Y.....	45	8	841	894
Porter, N. Y.....	15	7	240	262
Presidio of Monterey, Cal.....	53	17	1,032	1,102
Presidio of San Francisco, Cal.....	135	50	3,036	3,221
Riley, Kans.....	132	33	2,378	2,543
Robinson, Nebr.....	41	17	658	716
Sam Houston, Tex.....	102	20	1,970	2,092
St. Michael, Alaska.....	7	11	208	226
Sheridan, Ill.....	68	42	1,494	1,604
Sill, Okla.....	58	29	1,308	1,395
Snelling, Minn.....	58	21	1,308	1,387
Thomas, Ky.....	31	8	472	511
Vancouver Barracks, Wash.....	61	13	1,344	1,418
Wayne, Mich.....	29	7	821	857
Washington Barracks, D. C.....	15	13	481	509
William H. Seward, Alaska.....	16	9	360	385
Wood, N. Y.....	6	4	120	130
Total.....	1,987	587	42,574	45,148

The following shows the name, location, and capacity of the various camps constructed for the use of the Regular Army allowing 500 cubic feet of air space per man. These camps are located on Government reservations and target ranges are available except in the case of Vancouver Barracks.

Name.	Location.	Capacity.	Acreage.
Fort Benjamin Harrison.....	Indiana.....	4,802	2,417.81
Fort Douglas.....	Utah.....	4,368	2,995.00
Leon Springs.....	Texas.....	7,166	17,273.87
Fort Oglethorpe.....	Georgia.....	20,875	6,541.64
Presidio of San Francisco.....	California.....	3,923	1,479.94
Fort Riley.....	Kansas.....	4,560	19,446.73
Fort Sam Houston.....	Texas.....	806	1,245.11
Fort Snelling.....	Minnesota.....	4,181	2,361.75
Camp Robinson.....	Sparta, Wis.....	2,645	14,111.00
Vancouver Barracks.....	Washington.....	2,560	640.47

Those are all on Government reservations and target ranges are available at or near the posts.

Other camps for the training of troops in various branches of the service have been established as follows and buildings have been constructed, that on the 500-foot cubic basis will accommodate the men shown below. Target ranges are available in connection with Belvoir, American University, and Fort Leavenworth.

Name.	Location.	Capacity.	Acreage.
Engineers.....	Belvoir, Va., Government reservation.....	830	1,500
Do.....	American University, D. C., leased.....	1,750	.....
Signal Corps.....	Camp Alfred Vail, N. J., leased.....	751	425
Medical Corps.....	Concentration camp, Allentown, Pa., leased.....	370	47
Student officers.....	Fort Leavenworth, Kans., Government reservation.	1,980	6,781.75
Total.....	.....	5,690	.....

Accommodations for recruits at various recruiting stations have been provided by which the capacity of these Government-owned posts has been increased as shown in the following table:

Name.	Location.	Capacity.	Acreage.
Columbus Barracks.....	Ohio.....	6,636	70
Jefferson Barracks.....	Missouri.....	6,104	1,960.91
Fort Logan.....	Colorado.....	3,776	983.06
Fort McPherson.....	California.....	5,700	640
Fort Slocum.....	New York.....	6,576	86.50
Total.....	.....	28,792	.....

Further expansion can be taken care of at Jefferson Barracks, Mo., and Fort Logan, Colo.

TOTAL CAPACITY OF EMBARKATION CAMPS.

Name of camp.	Mobile capacity.	Camp guard.	Total.
Merritt, Tenafly, N. J.....	28,933	3,755	52,688
Stewart, Newport News, Va.....	15,234	1,000	16,234
Hill, Newport News, Va.....	4,822	1,030	5,852
Total.....	48,989	5,785	54,774

TOTAL CAPACITY OF QUARTERMASTER CAMPS.

Camp Ordway, Washington, D. C.....	¹ 3,800
Camp J. E. Johnson, Jacksonville, Fla.....	² 14,000
	17,800

Officers' training camps have been established at the following Army posts and on a basis of 500 cubic feet per man have a capacity of approximately 1,500 men each.

Name.	Location.	Capacity.	Acreage.
Fort Ethan Allen.....	Vermont.....	1,500	790
Leon Springs.....	Texas.....	1,500	17,273.87
Fort Logan H. Roots.....	Arkansas.....	1,500	1,049.25
Madison Barracks.....	New York.....	1,500	92.95
Fort McPherson.....	Georgia.....	1,500	236.64
Fort Myer.....	Virginia.....	1,500	317.4
Fort Niagara.....	New York.....	1,500	288.50
Plattsburg Barracks.....	do.....	1,500	703
Fort Sheridan.....	Illinois.....	1,500	720.80
		13,500	.....

In addition to the above there is being constructed a cantonment for the School of Fire at Fort Sill, Okla., which will house 3,864 men.

¹ Total.

² Does not include hospital or remount.

CAPACITY OF AVIATION TRAINING CAMPS AND CANTONMENT CAMPS.

Fields.	Enlisted men.	Cadets.	Commis- sioned offi- cers.	Total.
Chanute.....	624	300	37	961
Selfridge.....	624	300	37	961
Scott.....	624	300	37	961
Post.....	624	300	37	961
Fort Omaha (balloon school).....	¹ 1,650		² 84	1,734
Langlay.....	450		30	480
Hazelhurst.....	624	300	37	961
Garden City (concentration camp).....	3,750		325	4,075
Park.....	624	300	37	961
Taliaferro, No. 1.....	624	300	37	961
Taliaferro, No. 2.....	624	300	37	961
Taliaferro, No. 3.....	624	300	37	961
Call.....	624	300	37	961
Rich.....	624	300	37	961
Love.....	624	300	37	961
Kelly Field, No. 2.....	1,248	600	74	1,922
Ellington.....	1,248	600	74	1,922
Coretner.....	1,248	600	74	1,922
Wilbur-Wright.....	1,248	600	74	1,922
Middletown Depot.....	150		74	224
Harrishurg Depot.....	150		74	224
Dayton Depot.....	150		18	168
Morrison (concentration camp).....	3,750		325	4,075
McCook.....	150			150
Fort Sill observers' school.....	1,250	300	72	1,622
Dallas engine repair depot.....	600		18	618
Indianapolis engine repair depot.....	600		18	618
Brooks.....	624	300	37	961
Eberts.....	624	300	37	961
Taylor.....	624	300	37	961
Carlstrom, No. 1.....	624	300	37	961
Dorr, No. 2.....	624	300	37	961
Total.....	28,250	7,800	1,963	38,013

¹ This amount includes 600 men of balloon school.
² This amount includes 72 officers of balloon school.

TOTAL CAPACITY OF ARSENALS IN THE UNITED STATES.

	Men.		Men.
Watervliet Arsenal, N. Y.....	340	Rock Island Arsenal, Ill.....	150
Picatinny Arsenal, N. J.....	250	Augusta Arsenal, Ga.....	300
San Antonio Arsenal, Tex.....	200	Frankford Arsenal, Pa.....	70 to 75
Watertown Arsenal, Mass.....	100		
Benicia Arsenal, Cal.....	100	Total.....	1,510

CAPACITY OF ABANDONED MOBILE ARMY POSTS.

[Permanent construction.]

Name.	Commis- sioned officers.	Noncom- missioned officers.	Men.	Total.
Fort Apache, Ariz.....	18	6	325	349
Benicia Barracks, Cal.....	9	3	315	327
Boise Barracks, Idaho.....	14	8	371	393
Fort Brown, Tex.....	20	6	360	386
Fort Clark, Tex.....	35	5	759	799
Fort Duchesne, Utah.....	19	6	195	220
Camp Eagle Pass, Tex.....	4	2	60	66
Fort Egbert, Alaska.....	9	4	130	143
Fort McIntosh, Tex.....	11	1	270	285
Fort Walla Walla, Wash.....	16	10	288	314
Whipple Barracks, Ariz.....	11	4	388	403
Fort William H. Harrison, Ind.....	19	9	376	404
Fort Wingate, N. Mex.....	16	6	170	192
Total.....	201	73	4,007	4,281

DEPOTS.

Atlanta, Ga., general, rented.....	square feet..	542,699
Baltimore, Md., general, rented.....	do.....	991,860
Boston, Mass., general, rented.....	do.....	394,619
Chicago, Ill., general, rented.....	do.....	973,980
El Paso Depot, Tex., general, rented.....	do.....	274,309
Fort Sam Houston, Tex., general, rented.....	do.....	193,911
San Antonio, Tex., general, rented.....	do.....	252,200
Jeffersonville, Ind., general, rented.....	do.....	1,575
Jeffersonville, Ind., general, Government owned.....	cubic feet..	3,989,450
Louisville, Ky., general, rented.....	square feet..	6,900
Los Angeles, Cal., general, rented.....	do.....	66,000
New Orleans, La., general, rented.....	do.....	264,428
New York, N. Y., general, rented.....	do.....	302,561
New York, N. Y., general, Army building.....	do.....	60,500
Omaha, Nebr., general, Government owned.....	cubic feet..	1,064,232
Omaha, Nebr., general, rented.....	square feet..	39,114
Philadelphia, depot, general, rented.....	do.....	157,960
Philadelphia, depot, Schuylkill Arsenal, general, Government owned, cubic feet.....		2,929,548
Philadelphia depot, Pittsburgh depot, general, Government owned, cubic feet.....		644,568
St. Louis depot, general, rented.....	square feet..	297,000
St. Louis depot, temporary storage constgd. since Apr. 1, 1917.....	do.....	130,000
San Francisco, Cal., general, Government owned.....	cubic feet..	2,354,288
San Francisco, Cal., Army supply depot, storehouses A, B, C, and D, cubic feet.....		152,288
Seattle, Wash., general, rented.....	square feet..	56,000
Washington depot, field medical supply, general, rented.....	do.....	56,926
Quartermaster storehouse, Eckington Place.....	do.....	36,386
Portland, Oreg., general, rented.....	do.....	40,500
Kansas City, Kans., general, rented.....	do.....	87,552
Front Royal, Va., remount.....	animals..	798
Fort Keogh, Mont., remount.....	do.....	548
Fort Reno, Okla., remount.....	do.....	340
Totals:		
Square feet.....		5,399,980
Cubic feet.....		11,134,424
Animals.....		1,686

MOBILE ARMY POSTS—HOSPITALS.

	Beds.		Beds.
Apache, Fort, Ariz.....	24	Liscum, Fort, Alaska.....	16
Benicia Barracks, Cal.....	24	Logan H. Roots, Fort, Ark.....	262
Benjamin Harrison, Fort, Ind.....	42	Logan, Fort, Colo.....	40
Bliss, Fort, Tex.....	12	Mackenzie, Fort, Wyo.....	32
Boise Barracks, Idaho.....	12	Madison Barracks, N. Y.....	24
Brady, Fort, Mich.....	12	McIntosh, Fort, Tex.....	12
Clark, Fort, Tex.....	24	McPherson, Fort, Ga.....	224
Crook, Fort, Nebr.....	24	Meade, Fort, S. Dak.....	30
D. A. Russell, Fort, Wyo.....	250	Missoula, Fort, Mont.....	31
Davis, Fort, Alaska.....	18	Myer, Fort, Va.....	24
Des Moines, Fort, Iowa.....	536	Niagara, Fort, N. Y.....	12
Douglas, Fort, Utah.....	36	Oglethorpe, Fort, Ga.....	800
Duchesne, Fort, Utah.....	12	Omaha, Fort, Nebr.....	8
Eagle Pass, Tex.....	5	Ontario, Fort, N. Y.....	212
Egbert, Fort, Alaska.....	12	Plattsburg Barracks, N. Y.....	36
Ethan Allen, Fort, Vt.....	48	Porter, Fort, N. Y.....	26
Geo. Wright, Wash.....	66	Presidio of Monterey, Cal.....	30
Gibbon, Fort, Alaska.....	19	Presidio of San Francisco, Cal.....	28
Huachuca, Fort, Ariz.....	31	Riley, Fort, Kans.....	100
Jay, Fort, N. Y.....	26	Robinson, Fort, Nebr.....	24
Lawton, Fort, Wash.....	24	Sam Houston, Fort, Tex.....	195
Lincoln, Fort, N. Dak.....	10	St. Michael, Alaska.....	12
Leavenworth, Fort, Kans.....	62	Sheridan, Fort, Ill.....	40

	Beds.		Beds.
Sill, Fort, Okla. (old post).....	78	Wm. H. Seward, Fort, Alaska.....	12
Sill, Fort, Okla. (new post).....	¹ 1	Whipple Barracks, Ariz.....	10
San Diego Barracks, Cal.....	0	Wm. H. Harrison, Fort, Mont.....	20
Snelling, Fort, Minn.....	64	Wingate, Fort, N. Mex.....	24
Thomas, Fort, Ky.....	36	Wood, Fort, N. Y.....	8
Vancouver Barracks, Wash.....	248	Yellowstone, Fort, Wyo.....	58
Wayne, Fort, Mich.....	26		
Walla Walla, Fort, Wash.....	24	Total.....	4,161
Washington Barracks, D. C.....	6		

Coast Artillery posts hospitals.

	Beds.		Beds
Adams, Fort, R. I.....	24	McHenry, Fort, Md.....	14
Andrews, Fort, Mass.....	14	McKinley, Fort, Me.....	40
Baker, Fort, Cal.....	12	Michie, Fort, N. Y.....	⁴ 4
Banks, Fort, Mass.....	20	Miley, Fort, Cal.....	12
Barrancas, Fort, Fla.....	23	Monroe, Fort, Va.....	117
Barry, Fort, Cal.....	12	Morgan, Fort, Ala.....	22
Canby, Fort, Wash.....	(²)	Mott, Fort, N. J.....	12
Casey, Fort, Wash.....	17	Moultrie, Fort, S. C.....	24
Caswell, Fort, N. C.....	22	Preble, Fort, Me.....	12
Constitution, Fort, N. H.....	8	Revere, Fort, Mass.....	8
Crockett, Fort, Tex.....	16	Rodman, Fort, Mass.....	30
Columbia, Fort, Wash.....	6	Rosecrans, Fort, Cal.....	12
Dade, Fort, Fla.....	24	Schuyler, Fort, N. Y.....	18
De Soto, Fla.....	6	Screven, Fort, Ga.....	4
Du Pont, Fort, Del.....	24	Stevens, Fort, Oreg.....	24
Flagler, Fort, Wash.....	17	St. Philip, Fort, La.....	6
Fremont, Fort, S. C.....	8	Strong, Fort, Mass.....	12
Greble, Fort, R. I.....	12	Terry, Fort, N. Y.....	12
Hamilton, Fort, N. Y.....	(²)	Totten, Fort, N. Y.....	80
Hancock, Fort, N. J.....	30	Wadsworth, Fort, N. Y.....	³ 1
H. G. Wright, Fort, N. Y.....	32	Warren, Fort, Mass.....	12
Howard, Fort, Md.....	12	Washington, Fort, Md.....	26
Hunt, Fort, Va.....	9	Williams, Fort, Me.....	24
Jackson Barracks, La.....	12	Worden, Fort, Wash.....	24
Key West Barracks, Fla.....	23		
Levett, Fort, Me.....	12	Total.....	850
Mansfield, Fort, R. I.....	6		

NATIONAL ARMY CANTONMENTS—BASE HOSPITALS.

Location.	Capacity (beds).	Regimental infirmary (beds).	Location.	Capacity (beds).	Regimental infirmary (beds).
Camp Dodge.....	1,000	525	Camp Tayler.....	1,000	630
Camp Pike.....	1,000	490	Camp Sherman.....	1,000	155
Camp Custer.....	1,000	385	Camp Travis.....	1,000	525
Camp Devens, Mass.....	1,000	420	Camp Upton.....	1,000	420
Camp Lee, Va.....	1,000	490	Camp Dix.....	1,000	420
Camp Meade, Md.....	1,000	420	Camp Grant.....	1,000	490
Camp Funston, Kans.....	1,800	525	Camp Lewis.....	1,000	595
Camp Gordon.....	1,000	490			
Camp Jackson.....	1,000	490	Total.....	16,800	7,770

¹ Dispensary.² Not stated.³ Hospital; beds not stated.

NATIONAL GUARD CANTONMENTS—BASE HOSPITALS.

Location.	Capacity (beds).	Regimental infirmary (beds).	Location.	Capacity (beds).	Regimental infirmary (beds).
Camp Greene.....	1,000	200	Camp Doniphan.....	800	325
Camp Wadsworth.....	1,000	200	Camp Bowie.....	800	.....
Camp Hancock.....	800	350	Camp Sheridan.....	800	250
Camp McClellan.....	1,000	150	Camp Shelby.....	820	325
Camp Sevier.....	500	200	Camp Beauregard.....	500	275
Camp Wheeler.....	500	325	Camp Kearney.....	500	.....
Camp McArthur.....	800	325	Camp Fremont.....	500	200
Camp Logan.....	500	225			
Camp Cody.....	800	325	Total.....	11,620	3,675

HOSPITALS, MISCELLANEOUS—DEPOTS.

	Beds.	Miscellaneous:	Beds.
Pittsburgh, Pa.....	6	Williamsbridge.....	1,100
Recruit depots:		Fort McHenry, Md.....	500
Columbus Barracks, Ohio.....	105	Colonia.....	1,000
Jefferson Barracks, Mo.....	75	Fox Hills.....	500
McDowell, Fort, Cal.....	52	Camp Joseph E. Johnston.....	640
Slocum, Fort, N. Y.....	100	Camp Merritt, N. H.....	1,210
General hospitals:		Camp Stuart, Va.....	640
Bayard, Fort, N. Mex.....	486	Camp Kelly.....	100
Hot Springs, Ark.....	136	Allentown, Pa.....	50
Letterman General Hospital, California.....	548	Tilden, Fort, N. Y.....	200
Walter Reed Hospital, Dis- trict of Columbia.....	606	Westfield, Mass.....	60
Disciplinary barracks:		Total.....	6,219
Alcatraz Island, Cal.....	10		
Leavenworth, Fort, Kans.....	95		

Miscellaneous construction—Total estimated cost of various projects.

Location.	Barracks and quarters.	Supplies, services, and trans- portation.	Roads, walks, wharves, and drainage.	Construc- tion and repair of hospitals.	Mili- tary post ex- changes	Total.	Num- ber of per- sonnel.	Cost per capita.
Regular Army.....	\$8,133,057	\$4,899,419	\$624,637	.....	.....	\$13,657,113	75,076	\$182.58
Coast Artillery ¹.....	.....	1,650,000	370,000	.....	.....	5,482,000	18,500	296.32
Ice plant abroad.....	.....	2,091,275	.....	.....	.....	2,091,275	.....	.....
Tenafly, Inglewood, N. J.....	2,768,674	2,582,565	262,662	\$481,815	\$49,505	6,145,221	32,688	188.00
Newport News, Va.....	4,036,780	2,722,747	780,323	509,375	.....	8,049,225	22,086	364.45
Quartermaster reserve camp.....	2,065,111	950,221	384,971	357,413	7,751	3,765,467	14,000	268.96
Storage at embarka- tion ports.....	3,000,000	3,000,000	971,000	.....	.....	6,971,000	.....	.....
Field and base hospi- tal.....	.....	.....	.....	16,721,652	.....	16,721,652	.....	.....
Grand total.....	20,003,622	17,896,227	4,393,593	18,070,255	57,256	63,882,953	162,350	.....

¹ Barracks and quarters, seacoast defenses, \$3,462,000.

(Thereupon the committee adjourned to meet to-morrow, Friday, January 18, 1918, at 10.30 o'clock a. m.)

COMMITTEE ON MILITARY AFFAIRS,
HOUSE OF REPRESENTATIVES,
Friday, January 18, 1918.

The committee met at 10.30 o'clock a. m., Hon. S. Hubert Dent (chairman) presiding.

STATEMENT OF MAJ. GEN. HENRY C. SHARPE, QUARTERMASTER GENERAL, ACCOMPANIED BY BRIG. GEN. I. W. LITTELL, LIEUT. COL. CHARLES P. DALY, MAJ. W. H. OURY, AND MAJ. R. C. MARSHALL, JR.—Concluded.

MILITARY POST EXCHANGES.

The CHAIRMAN. The next item is, "Military post exchanges, \$1,247,512."

You got an appropriation at the last session under this item of \$800,000.

Gen. SHARPE. Mr. Chairman, I would like to submit a table showing the amounts required for the current requirements and new construction, under each one of the items, and then another table showing the apportionment of the appropriation to the United States and the Philippine Islands, and then another table explanatory of each one of the items.

Col. DALY. There is a little correction to be made in the proviso in that item, Mr. Chairman, which appears in the last part of the item. That is due to a clerical error. The proviso now reads, "*Provided, That no part of this appropriation shall be expended for personal services.*"

The proviso as it appeared in the act of October 6 read, "*Provided, That not more than \$125,000 of this appropriation may be expended for personal services, and no person shall be employed hereunder at a rate of compensation exceeding \$1,800 per annum.*" The deficiency act of October 6 limited the amount to be paid out for personal services to \$125,000. In this appropriation we are asking \$250,000 for that purpose.

The CHAIRMAN. What is the reason for that?

Col. DALY. The increased activities and the necessity for increased personnel. Most of the features incorporated in this bill are based on an estimate made by the War Department Commission on Training Camp Activities.

Mr. Fosdick is the chairman of that commission. He was asked to come here this morning and explain the items, but I understand he is before the Committee on Appropriations now explaining the deficiency estimate for the same purpose.

Mr. GORDON. They are not asking for the same appropriation from two committees, are they?

Col. DALY. One is a deficiency. This is the appropriation for the next fiscal year, and there is a deficiency in the appropriation under this item for the fiscal year 1918, and that is being handled by the Committee on Appropriations.

Mr. ANTHONY. When you speak of using some of this money for personal services, do you mean you will pay the representatives of this Commission out of this money?

Col. DALY. The expenses of the commission and the employees hired by the commission to carry on this work.

Mr. ANTHONY. Did not that commission secure a large amount of money from the public for the purpose of carrying on its work?

Col. DALY. I understand there was a large subscription—I do not know the amount—for the purpose of being expended under the direction of this commission.

Mr. ANTHONY. Now, it is proposed to augment that public fund by using the money from this item for that purpose?

Col. DALY. Yes, sir. There are certain items in this appropriation that do not pertain to the activities of the War Department Commission on Training Camp Activities. These are listed under the various items, and Gen. Littell can tell you what those are.

The CHAIRMAN. Is there any other item under that estimate that you want to make a special explanation of?

Col. DALY. No, sir.

The CHAIRMAN. You say that accounts for the increase in the appropriation entirely, that is, the activities of the Training Camp Commission?

Col. DALY. Yes, sir.

Mr. GORDON. How much has been donated by private persons for this work?

Col. DALY. I do not know: We have no record of that.

Mr. GORDON. Do you not think this committee ought to be placed in a position so that it can know how much money is available from other sources before it is asked to increase the appropriation of last year?

Col. DALY. There was \$750,000 appropriated last year in the two deficiency acts. I do not recall the amount in the act of May 12.

Mr. GORDON. Who expends this money donated by private subscriptions?

Col. DALY. The Commission on War Department Training Camp Activities.

Mr. ANTHONY. Are they asking us to pay the personnel of their organization?

Col. DALY. That is included in this amount.

Mr. ANTHONY. So that they will have all the money contributed by the public to spend on the welfare of the soldiers?

Col. DALY. Yes, sir.

Mr. ANTHONY. How many secretaries have they employed? They have one at each camp, do they not?

Col. DALY. Yes, sir.

Mr. ANTHONY. How many of them are there, do you know?

Col. DALY. I do not know. They have, in addition to that, directors of athletics at each of the camps.

Mr. ANTHONY. I understand that embraces the work of these community houses?

Col. DALY. Yes, sir.

Mr. ANTHONY. And that this committee is furnishing money jointly with these communities for the maintenance of these houses after they are built?

Col. DALY. Yes, sir. There is a long statement of their activities in these hearings.

The personnel of the commission consists of Mr. Raymond B. Fosdick, chairman, and several members.

Their names will be inserted in the record.

Mr. FIELDS. Is not Dr. Claxton a member of that?

Col. DALY. He may be. This is a list of the personnel of the commission which we got from the commission.

Mr. KAHN. Have you any connection whatever with the buildings that they call hostess's houses, that I understand they are putting up at the various camps? I know they have one at Camp Lewis, at American Lake, that was put up by the Young Women's Christian Association, and the purpose of it is that when a relative of the soldier comes to the camp, that relative, especially if it be a female relative, can have a house where she can meet the soldier. It is a very good thing.

Gen. SHARPE. I saw one at Camp Jackson, at Columbia, and I understood it was put up out of the funds of the Young Women's Christian Association. They were given permission to erect it, and that was done at their expense.

Mr. KAHN. But they wanted from your department, in connection with that, as I now recall—I think there was a report made of it by Col. Stone—they wanted a drying room. The soldier frequently has to meet his parents when it is raining hard, and they wanted a little room built by your department so that the soldier can dry his clothes when he comes in to see his mother or his sister in just a few minutes, taking off his coat, and getting it dried. It makes it very much more convenient for him.

They have also recommended, as I understand it, that you put in a telephone service, so that they can call a soldier direct, or get word to his commanding officer direct from the hostess's house to the particular portion of the camp where he may be stationed. Have you taken any action on those recommendations at all?

Gen. LITTELL. I do not remember any recommendations for a telephone service, but they have made a request for heat and light and water connections.

Gen. SHARPE. We have asked a change in the verbiage of the law authorizing the use of those things. The law authorized the Young Men's Christian Association to have fuel provided for them, and we have asked to have the law changed so that all the different associations or organizations of that kind may be placed on the same basis.

There was a Jewish association that had a house established there, and under the law we could not furnish them with fuel, and the Knights of Columbus are also in the same position and we have asked for a modification of the law to give those organizations the same privileges as the Young Men's Christian Association now has.

Mr. KAHN. I went into the hostess' house at Camp Lewis. There were upward of 400 or 500 women relatives of soldiers who were visiting with their boys. Those mothers who had little babies in arms were shown to a little room where they had a number of little beds, with a nurse there, all provided by the Young Women's Christian Association, so that the baby could be taken care of while the mother was visiting with her boy. I thought that was a magnificent institution.

Mr. FIELDS. Do you not think the mother returns home better satisfied as a result of that?

Mr. KAHN. I am positive about that, and the purpose of asking these questions is to find out whether anything has been done by the Quartermaster's Department to better that service, because all the betterments we can give it will make the mother still more satisfied.

Gen. SHARPE. We are doing that in the Quartermaster's Department. The telephone service is now furnished by the Signal Corps, and I imagine they have taken the same cooperative attitude in the matter that we have.

Gen. LITTELL. We have assisted them in giving supervision for the construction of the buildings. Those buildings are built by private funds, and in some cases they ask to have our contractor build the building, and in every case where they so request, we comply with the request and also furnish such supervision as they want.

Mr. KAHN. I hope if the recommendations of Col. Stone come before you that they can be carried into effect because they will materially improve the conditions, and as was suggested by Mr. Fields, the mothers and the sisters and the wives of the men will go back home very much more better satisfied.

Gen. LITTELL. It is one of the best institutions they have there.

Col. DALY. The various activities of the commission are listed in a memorandum we have in regard to that.

The CHAIRMAN. You may insert that in the record.

(The memorandum referred to is as follows):

COMMISSION ON TRAINING CAMP ACTIVITIES, WAR DEPARTMENT.

CREATION AND PURPOSE.

The commission on training camp activities was created in April, 1917, by the Secretary of War for the purpose (a) of providing recreational facilities for soldiers in training camps, and (b) of enforcing the law relating to drinking and prostitution near Army encampments, and the sale of liquor to soldiers in uniform. A general order from The Adjutant General of the Army to the several department commanders, dated June 19, 1917, contains the following statement:

"The Secretary of War has created a 'commission on training camp activities' to act under his immediate direction. This commission will act as a clearing house for suggestions of various kinds in relation to the question of providing rational recreational and other facilities for men in training camps. This includes training camps now in operation and all military camps of the Regular Army, National Guard, and National Army.

"The functions of the commission will be largely advisory, but the Secretary of War expects to consult it upon the whole question of police regulations outside the limits of military camps.

"*Organization.*—The personnel of the commission is as follows: Raymond B. Fosdick (chairman), Lee F. Hanmer, Thomas J. Howells, Marc Klaw, Joseph Lee, Malcolm L. McBride, John R. Mott, Charles P. Neill, Col. P. E. Pierce (U. S. Army); Joseph E. Raycroft, Jasper J. Mayer (secretary)."

The chairman, assisted by the secretary, is actively engaged in directing the work of the commission. The other members of the commission devote all or part of their time to supervising one or more of the several activities of the commission. Much of the work of the commission is carried on by private organizations which have given their services to the Government.

The main activities of the commission may be classified as follows:

1. Providing recreational facilities—
 - (a) Inside camps.
 - (b) In communities adjoining camps.
2. Providing educational facilities.
3. Supervising work of post exchanges.
4. Organizing work of law enforcement—
 - (a) Providing recreational facilities.
 - (b) Inside camps.
5. Work of private organizations.

In organizing the recreational facilities within the camps the commission has used the services of private organizations, especially of the Young Men's Christian Association, the Knights of Columbus, and the Young Men's Hebrew Association. During the first few months of the war the Secretary of War permitted no other organizations but those mentioned above to operate within the encampments, but on October 31 he decided that thereafter fraternal and similar organizations would be admitted to the camps, subject to the approval of the commanding officers, and in accordance with rules made by the Secretary of War.

The Young Men's Christian Association, under the direction of John R. Mott, who is a member of the commission, has become a considerable factor in the social life of the camps. From 8 to 13 recreational and social buildings in each National Army cantonment and at least six buildings in each National Guard camp are being erected by this organization. In these buildings and elsewhere in the camps the Young Men's Christian Association is providing facilities for social intercourse and various kinds of entertainment.

Other social and fraternal organizations in the camps are carrying on work similar to that of the Young Men's Christian Association. On October 15, 1917, the Knights of Columbus were operating 65 halls in the various training camps. The Young Men's Hebrew Association has identified itself in this work with the Young Men's Christian Association.

ATHLETICS.

The recreative athletics of the camps are being organized under Joseph E. Raycroft, a member of the commission. The supervision of this work in each camp is in the hands of a divisional athletic council, supplemented by regimental councils and such organizations in the companies as are necessary. The immediate direction of the recreative athletics in each camp is in the hands of the sports director, who is a representative of the commission. These sports directors cooperate with the representative of the Young Men's Christian Association and the Knights of Columbus who are assigned to athletic work. Athletic equipment is being supplied to each regiment by the commission.

Because boxing has been found to be a valuable introduction to bayonet fighting the commission is laying emphasis on instruction in boxing. An advisory committee of five boxing experts has been organized to advise the commission concerning training in boxing, and boxing instructors are being appointed for the National Army cantonments.

MASS SINGING.

The commission is developing mass singing in camps. An advisory committee on mass singing, called the national committee on Army and Navy camp music, has been created, and the commission is appointing song leaders in all the camps. This work is in charge of Lee F. Hanmer, a member of the commission. A committee of camp song leaders has compiled a song book, entitled "Songs of the Soldiers and Sailors," which is being sold at cost through the post exchange.

ENTERTAINMENTS.

In each of the 16 National Army cantonments the commission has built a fully equipped modern theater building seating 3,000 people. The work of arranging dramatic programs for these liberty theaters is in charge of Marc Klaw, who is a member of the commission, and who is assisted in his work by a committee of 23 theatrical men and an advisory committee of 21 men prominent in various walks of life.

In each National Army cantonment and each National Guard encampment, there has been erected a tent seating 2,000 people in which Chautauqua entertainments are provided. In some camps the Young Men's Christian Association Auditorium also is used for these programs, and in many camps there are two Chautauqua tents. The management of these liberty theaters is in charge of Harry P. Harrison, for the commission.

To these liberty theaters and liberty entertainments admission fee of 5 to 25 cents is charged. Receipts and disbursements are supervised by the commission, whose object is to furnish good, wholesome entertainment at prices necessary to cover only the cost of providing the entertainment.

LIBRARIES.

At the request of the commission and under its supervision library facilities are being provided by the American Library Association. Library buildings have

been erected in the 32 National Army and National Guard camps, and trained librarians direct the distribution of books and magazines through the Young Men's Christian Association and the Knights of Columbus buildings and company barracks. Books are also provided for the smaller camps, as well as being sent to the troops in Europe.

1. PROVIDING RECREATIONAL FACILITIES.

(b) *In communities adjoining camps.*—The placing of the social and recreational facilities of the communities adjoining the camps at the disposal of the soldiers is in charge of the Playground and Recreation Association of America, of which Joseph Lee, president, is a member of the commission. This association has sent out 100 representatives, and has helped in organizing 100 communities. The plan of the representatives is to establish in each camp community a committee of prominent men and women, each of whom become chairman of a subcommittee designated to organize some well-defined social or recreational group. Through these groups clean entertainments and wholesome environments are made possible on the vast scale necessary to provide for the large number of soldiers who spend part of their leisure in the communities near camp.

2. PROVIDING EDUCATIONAL FACILITIES.

The educational work of the commission has been organized under a committee consisting of five men prominent in the educational world. This committee is providing courses in the camps in all subjects for which there is sufficient demand. It is utilizing the services of the educational department of the Young Men's Christian Association university extension courses, and such other facilities as the local communities can offer. The committee is devoting special attention to instruction in French, and is offering courses in which a vocabulary of 600 to 700 French words can be learned during the regular training of the soldier. In some camps the committee has met with the problem of teaching the English language to soldiers of foreign extraction. In one National Army cantonment 2,000 men are learning to read and write English.

Under the direction of the American Social Hygiene Association and the Young Men's Christian Association the commission has undertaken in the camps a wide educational campaign in sex hygiene. The organization of this educational work is under Walter Clarke, of the American Social Hygiene Association. The campaign includes lectures, moving-picture exhibits, and the distribution of literature.

3. SUPERVISING WORK OF POST EXCHANGES.

By General Order No. 110 of the War Department, dated August 21, 1917, the commission has been directed to assist and supervise the work of providing post exchanges or Army stores for the National Army. The commission appointed a committee, consisting of Malcolm L. McBride and Lee F. Hanmer, of the commission, and Capt. E. A. Buchanan, United States Army, of which Mr. McBride was the chairman, to carry on the provisions of the above order.

A division exchange officer was appointed and stocks and fixtures were purchased for exchanges in each of the National Army cantonments.

In each cantonment there is an exchange building for each regiment or the approximate equivalent thereof in which tobacco, candy, toilet articles, and other things which add to the comfort and contentment of the soldier are offered for sale.

The net profits are distributed in the form of dividends to organizations within the camp and are expended only in accordance with War Department regulations in the interest of the soldier. The division exchange officer and the organization provided by this commission has contributed particularly to effecting the consolidation of orders of stock for exchanges in each camp. Under present conditions and in view of the great quantities of merchandise turned over daily in these camps this is an important consolidation. The lack of warehouses for the use of these exchanges has handicapped this feature of the business materially, but it is hoped that later the War Department will provide these.

The main purpose of the exchange is to place merchandise in the hands of the soldiers at a reasonable price.

4. ORGANIZING WORK OF LAW ENFORCEMENT.

The commission has been specially charged with the duty of assisting to enforce sections 12 and 13 of the Army act, approved May 18, 1917, providing for the control

of alcohol and prostitution near camps, and the prohibition of the sale of liquor to soldiers in uniform. Under the authority granted by this act the Secretary of War has issued regulations dated July 25, 1917, forbidding the sale of alcoholic liquors or the setting up of houses of prostitution within 5 miles of any camp.

To enforce the provisions of these regulations and to carry out Secretary Baker's policy of suppressing segregated districts near camps the commission has organized a division of law enforcement, under the direction of Bascom Johnson, who is assisted by lieutenants detailed from the Medical Department of the Army. This division is aided in its work by the staffs of such organizations as the American Social Hygiene Association, the Committee of Fourteen of New York, the Committee of Fifteen of Chicago, and the Bureau of Social Hygiene of New York. The actual enforcement of the law is turned over to the Department of Justice, the local provost guards, and the State and municipal authorities.

In its duty of law enforcement the commission is working in close cooperation with the Medical Department of the Army and the Public Health Service, which are also interested in preventing the evils of strong drink and prostitution. Both these services are developing medical facilities for the treatment of venereal diseases.

The commission is arousing the local communities and the State and municipal authorities to their responsibility in preserving the health and well being of the soldiers. The Secretary of War has sent letters to the governors of the States, to the chairmen of the State councils of defense, and to the mayors of cities, and the sheriffs of counties in the neighborhood of all military training camps, explaining the purpose of the commission on training camp activities and the policies of the War Department in regard to alcohol and prostitution, and requesting cooperation. In arousing the camp communities to their responsibility toward the soldiers, the commission is assisted by the subcommittee for civilians' cooperation in combating venereal diseases, which has circulated several pamphlets calling upon local populations to protect the soldiers.

By cooperating with the State and local authorities the commission has succeeded in securing the abolition of the segregated districts in 20 communities, and military welfare commissions to aid in the work of vice repression have been appointed by the governors of California and Arkansas.

SOURCES OF REVENUE.

The work under the commission is paid for (a) out of the funds of private organizations serving as agents for the commission, (b) out of contributions by private individuals, and (c) to a small extent out of congressional appropriations for certain specific purposes.

Col. DALY. In addition to the activities listed in this memorandum the commission has a section that looks after the work of law enforcement with respect to the sales of alcoholic liquors near the camps, and prostitution. They handle all of that.

Mr. McKENZIE. Does this appropriation cover the post exchanges in France, or is it confined to those in our country?

Col. DALY. It covers the troops abroad. We have a recommendation for a change in the language in this part of the act. The appropriation "Military post exchanges" now provides for the repairs to buildings erected at private cost, in the operation of the act approved May 31, 1902. That confines it to the Young Men's Christian Association exclusively. We want to change the act to read in this way, "Repairs to buildings constructed under the authority of the Secretary of War by any organization for the promotion of the social, physical, intellectual, or moral development of the troops in the camps and in the field." That will include the Knights of Columbus, the Young Men's Hebrew Association, and other associations. They are excluded now; they do not get the privileges that the Young Men's Christian Associations do, because that is authorized by law at the present time.

Mr. SHALLENBERGER. Do you not think that ought to be limited to those authorized?

Col. DALY. That is what is proposed. A similar provision will have to be put in the appropriation for regular supplies, to provide for heat and light, which is now allowed to the Young Men's Christian Association, if it is approved, to allow heat and light to these other organizations which may be authorized.

I wanted to ask, Mr. Chairman, permission to submit to the committee the proposed change in this particular provision, under the appropriation "Regular supplies and waters and sewers." We will have to add a similar provision in the appropriation for waters and sewers, in order to provide for the furnishing of water.

Mr. SHALLENBERGER. Is this the only item in the bill that proposes to furnish money for these particular things you have mentioned?

Col. DALY. Yes, sir.

Mr. SHALLENBERGER. I have read that it is intended, in France, to put some city other than Paris in charge of the American troops, and have that city prepared for a place of rest for the troops when they come away from service in the trenches, that they may go there instead of going to Paris, and have all of the city facilities entirely turned over to our men for entertainment and rest, in order to do away with the temptations that ordinarily would surround them in a large city. Is there such a thing as that in contemplation?

Col. DALY. Not such a large project. There is nothing for the troops in France other than the post exchanges.

Mr. SHALLENBERGER. Who would know whether or not that is contemplated? I saw it stated that one of the most serious things in connection with the maintenance of an army is the trouble that the English troops have had in going to and returning from London, and that the French troops have had in going to and returning from Paris, that is, the great temptations that confront them in the large cities, and it was said that that was a matter of great seriousness.

Col. DALY. That would come within the jurisdiction of this commission on training camp activities.

Mr. DAVIDSON. I would like to ask whether in connection with these activities there has been any very strong demand for the extension of this privilege to other fraternal societies, whether there has been any difficulty in taking care of that question so as to avoid any idea that favoritism was being shown to any particular fraternal society?

Col. DALY. I do not think these organizations are considered as fraternal organizations which we speak of in here. The Knights of Pythias and the Masonic bodies, of course, are considered as fraternal organizations. They are not included in this provision.

Mr. DAVIDSON. None of them are included, but there was a demand made in some places for some of them, and that was refused, and properly so, I think. I wanted to know to what extent that had gone, and whether that had been satisfactorily explained, so that all of the fraternal societies realize the advisability of not duplicating this kind of work.

Col. DALY. I think so. There are none of those fraternal societies included in this provision.

Mr. ATHONY. I understood that some of the fraternal orders did raise large sums of money, such as the Eagles and the Elks; that

they raised a million dollars for war purposes. How do they use that money, in cooperation with the War Department or independently?

Col. DALY. They are cooperating, as I understand it, with this Commission on Training Camp Activities.

Mr. ANTHONY. So that without having an official status they are working with this commission?

Col. DALY. Yes, so I understand.

Mr. FIELDS. You referred to somebody who had charge of the enforcement of law. Whom did you refer to?

Col. DALY. I was referring to this same Training Camp Activities Commission. They handle that.

Mr. FIELDS. How is that commission succeeding, under the prohibition and social evil amendments in the law?

Col. DALY. I could not tell you anything about that.

The details of the estimate are as follows:

Military post exchanges, fiscal year 1919:

Deficiency act June 15, 1917.....	\$500,000
Deficiency act Oct. 6, 1917.....	250,000

Total.....	750,000
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Military post exchanges.— For continuing the construction, equipment, and maintenance of suitable buildings at military posts and stations for the conduct of the post exchange, school library, reading, lunch, amusement rooms, and gymnasium, including repairs to buildings erected at private cost, in the operation of the act approved May thirty-first, nineteen hundred and two; and repairs to buildings constructed under the authority of the Secretary of War by any organization for the promotion of the social, physical, intellectual, and moral development of troops in camp and in the field; for the rental of films, purchase of slides, supplies for and making repairs to moving-picture outfits, and for similar and other recreational purposes at training and mobilization camps now established, or which may be hereafter established, to be expended in the discretion and under the direction of the Secretary of War, \$1,247,512: *Provided*, That not more than \$250,000 of this appropriation may be expended for personal services and no person shall be employed hereunder at a rate of compensation exceeding \$1,800 per annum.

RECAPITULATION.—ESTIMATE, "MILITARY POST EXCHANGES." FISCAL YEAR 1919
United States and Philippine Islands.

Item No.	Purpose.	Appropriation, fiscal year 1918.	Estimate for fiscal year 1919.			Estimate per capita 2,952,000 officers and enlisted men.
			Present strength.		Total.	
			Current requirements.	New construction.		
315	Construction of suitable buildings at military posts and stations for the conduct of the post exchanges, school, library, lunch, amusement room, and gymnasium.....	\$23,600		\$68,367	\$68,367	\$0.023
316	Equipment of buildings at military posts and stations for the conduct of the post exchange school, library, reading, lunch, amusement rooms, and gymnasium.....	9,600	\$922,900		922,900	.313
317	For the maintenance of buildings at military posts and stations for the conduct of post exchanges, school, library, lunch, amusement rooms, and gymnasiums.....	20,500	35,500		35,500	.012
318	Repair of buildings erected at private cost.....	700	500		500	.0002
319	Rental of films.....	1,700	80,500		80,500	.027
320	Purchase of slides.....	935	74,460		76,460	.026
321	Supplies for making repairs to moving-picture outfits.....	2,345	63,285		63,285	.021
Total.....		59,380	1,179,145	68,367	1,247,512	.4222

United States.

Item No.	Purpose.	Appropriation, fiscal year 1918.	Estimate for fiscal year 1919.			
			Present strength.			Estimate per capita 2,952,459 officers and enlisted men.
			Current requirements.	New construction.	Total.	
315	Construction of suitable buildings at military posts and stations for the conduct of the post exchanges, school, library, lunch, amusement room, and gymnasium.....	7,100	.....	\$50,367	\$50,367	\$0.017
316	Equipment of buildings at military posts and stations for the conduct of the post exchange, school, library, reading, lunch, amusement rooms, and gymnasium.....	7,600	\$918,000	.....	918,000	.313
317	For the maintenance of buildings at military posts and stations for the conduct of post exchanges, school, library, lunch, amusement rooms, and gymnasiums.....	13,500	27,500	.....	27,500	.009
318	Repair of buildings erected at private cost.....	200	.....	.....	.....	.....
319	Rental of films.....	1,700	79,500	.....	79,500	.027
320	Purchase of slides.....	575	76,100	.....	76,100	.026
321	Supplies for making repairs to moving-picture outfits.....	1,325	62,265	.....	62,265	.021
	Total.....	32,000	1,163,365	50,367	1,213,732	.413

Philippine Islands.

Item No.	Purpose.	Appropriation, fiscal year 1918.	Estimate for fiscal year 1919.			
			Present strength.			Estimate per capita 19,541 officers and enlisted men.
			Current requirements.	New construction.	Total.	
315	Construction of suitable buildings at military posts and stations for the conduct of the post exchanges, school, library, lunch, amusement room, and gymnasium.....	\$16,500	.....	\$18,000	\$18,000	\$0.921
316	Equipment of buildings at military posts and stations for the conduct of the post exchange, school, library, reading, lunch, amusement rooms, and gymnasium.....	2,000	\$4,900	.....	4,900	.251
317	For the maintenance of buildings at military posts and stations for the conduct of post exchanges, school, library, lunch, amusement rooms, and gymnasiums.....	7,000	8,000	.....	8,000	.409
318	Repair of buildings erected at private cost.....	500	500	.....	500	.026
319	Rental of films.....	.....	1,000	.....	1,000	.061
320	Purchase of slides.....	360	360	.....	360	.018
321	Supplies for making repairs to moving-picture outfits.....	1,020	1,020	.....	1,020	.062
	Total.....	27,380	15,780	18,000	33,780	1.726

Item military post exchanges 315.—Construction of suitable buildings at military posts and stations for the conduct of the post exchanges, school library, lunch, amusement room, and gymnasium.

[Estimate fiscal year 1919, \$68,367.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....		\$50,367.00	\$50,367.00		\$18,000.00	\$18,000.00	\$68,367.00
Appropriated fiscal year 1918.....		7,100.00	7,100.00		16,500.00	16,500.00	23,600.00
Expended fiscal year 1917.....		253.62	253.62				253.62

REMARKS.

United States.—The amount estimated for under this item is to provide for new construction of buildings at military posts and stations for the conduct of post exchanges, etc., at various posts in the United States as per list of projects as follows.

Fort Barry, Cal., post exchange building \$12,000

The size of this building is to be approximately 25 by 60 feet and of frame construction with slate roof. It is required to replace old temporary buildings built by the Engineer Department which are unsightly and unsuited to the purpose and should be destroyed or removed.

Fort Columbia, Wash., heating plant for gymnasium..... \$1,578

The size of this building is undetermined, but is to have a heating capacity of 1,325 square feet and to provide for a hot-water heating system. The climate at this post is damp and only stoves are now used in the building. The heating plant is to make the building comfortable and the project is considered essential.

Fort Screven, Ga. Addition to post exchange building to house war-game instruction..... \$10,500

Size of building 34 feet 10 inches by 49 feet 10 inches, and is to be of concrete with tile roofs in order to be more secure from damage by heavy storms and to reduce fire risk. This building is to be used to house war game instructions, as required by G. O. 12, W. D. 1914.

Fort Shafter, H. T., addition to building No. 23 (P. E.) \$18,750

Second-story addition to No. 23. The size of building is 44 by 52 feet, and it is of frame construction. This addition is needed in order to accommodate a regiment with gymnasium and library.

Fort Terry, N. Y., addition of wing to post exchange building No. 49..... \$2,850

The size of the building is 10 by 23 feet, and it is to be of brick construction. The building is needed to provide additional storage facilities and to make a place for crating and handling of goods. The project is considered essential.

Fort Totten, N. Y., construction of bowling alleys, and alterations in gymnasium building No. 28..... \$1,689

The size of this building is 26 feet 11 inches by 102 feet 11 inches, and it is to be of wood construction. The building is needed to provide additional bowling alleys for the amusement of the troops at this post. The project is considered essential.

Fort Dade, Fla., school to accommodate 35 scholars..... \$3,000

The size of this building is to be 40 by 20 feet, and it is to be of wood construction. It is to be used as a school house and room for war games. The project is considered essential.

Expenditures under this item for fiscal year 1917 were for the installation of a boiler for post exchange and gymnasium at Fort Lawton, Wash., at a cost of \$235.

Philippine Islands.—The amount called for by the department authorities for this item is \$18,000, which is \$1,500 more than the estimate for the fiscal year 1918. It is

estimated that the above amount will be required for new construction of additions and modifications to the present post exchange at all posts in the Philippine Department. This increase is necessary due to the increase in garrison strength, and until the garrison of each post is definitely known no modification will be made in the post exchanges, for which reason the estimate is based upon the requirements of the department as a whole.

Item military post exchanges 316.—Equipment of buildings at military posts and stations for the conduct of the post exchange, school, library, reading, lunch, amusement rooms, and gymnasium.

[Estimate fiscal year 1919, \$922,900.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$918,000.00	.....	\$918,000.00	\$4,900.00	.....	\$4,900.00	\$922,900.00
Appropriated fiscal year 1918.....	7,600.00	.....	7,600.00	2,000.00	.....	2,000.00	9,600.00
Expended fiscal year 1917..	13,630.07	.....	13,630.07	3,418.00	.....	3,418.00	17,048.07

REMARKS.

United States.—For the fiscal year 1918 there was allotted for the purposes of equipment the sum of \$7,600. The total cost of equipment for 1917 according to records of this office was \$19,629.09.

Supplies.—The supplies to be purchased under this item consists of apparatus for gymnasiums, tables, chairs, bookcases, office desks, etc., for reading rooms, and chairs, stage settings, moving-picture outfits, etc., for amusement rooms.

Services.—The services called for under this item consist of contract and job services; also hire, and will be required for keeping in repair gymnastic apparatus, bowling alleys, and equipment, including moving-picture machine for chaplain's outfit.

Based on a strength of 2,952,000 officers and men for 1919, and exclusive of outfits already on hand at permanent stations, it is estimated there will be required 1,500 moving-picture outfits, including graphophones, organs, etc., at a cost of \$600 each, or a total of \$900,000.

Philippine Islands.—\$4,900 is called for under this item by the Philippine authorities for fiscal year 1919, which is \$2,900 more than the estimate for fiscal year 1918. It is to provide for the purchase of bowling alleys and incidentals thereto, for the installation at all posts that are not provided with this equipment. Supplies, \$4,300; services, \$600.

Item military post exchanges 317.—For the maintenance of buildings at military posts and stations for the conduct of post exchanges, school, library, lunch, amusement rooms, and gymnasiums.

[Estimate fiscal year 1919, \$35,500.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$27,500.00	.....	\$27,500.00	\$8,000.00	.....	\$8,000.00	\$35,500.00
Appropriated fiscal year 1918..	13,500.00	.....	13,500.00	7,000.00	.....	7,000.00	20,500.00
Expended fiscal year 1917.....	17,670.43	.....	17,670.43	4,632.00	.....	4,632.00	22,302.43

REMARKS.

United States.—The total amount estimated under this item is \$27,500, and is entirely for current requirements at permanent posts.

Philippine Islands.—The estimate for the Philippine Islands under this item is \$8,000, which is \$1,000 more than the estimate for the fiscal year 1918. This sum is required for the necessary repairs to post exchanges and gymnasiums at all posts in the Philippine Department.

Item military post exchanges 318.—Repair of buildings erected at private cost.

[Estimate fiscal year 1919, \$500.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....				\$500.00		\$500.00	\$500.00
Appropriated fiscal year 1918.....	\$200.00		\$200.00	500.00		500.00	700.00
Expended fiscal year 1917.....	418.77		418.77	500.00		500.00	918.77

REMARKS.

United States.—There is no estimate made under this item. Following is a list of posts where Y. M. C. A. buildings have been erected at private cost under the act approved September 30, 1902: Fort Leavenworth, Kans.; Columbus Barracks, Ohio; Fort Hancock, N. J.; Fort Slocum, N. Y.; Fort Monroe, Va.; and Fort Wm. McKinley, P. I. An allotment for repairs to these buildings is made each year and has been included under item 317.

Philippine Islands.—Four hundred dollars is called for the department authorities under this item and is the same as estimated for the fiscal year 1918. This amount is required for repairs to Memorial Hall and Y. M. C. A. building at Fort Wm. McKinley.

Item military post exchanges 319.—Rental of films.

[Estimate fiscal year 1919, \$80,500.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$79,500.00		\$79,500.00	\$1,000.00		\$1,000.00	\$80,500.00
Appropriated fiscal year 1918.....	1,700.00		1,700.00				1,700.00
Expended fiscal year 1917.....	1,675.00		1,675.00	454.16		454.16	2,129.16

REMARKS.

United States.—The cost for fiscal year 1917 under this item is \$1,675. The funds estimated for under this item are required for rental of films for the moving-picture machines, which were purchased for chaplain's equipment appropriated for in the fiscal year 1915. Sixty-six of these machines were provided for use in the United States and Philippine Islands. The estimated cost for rental of films for each of the 59 moving-picture machines furnished for use in the United States is approximately \$72 each. It is not intended that the amount allowed by this office is to cover the total expense; this amount is to assist post authorities in their special feature films and a major part of the expense is to be borne as usual by post exchange funds. The amount estimated for permanent posts is a slight increase over that estimated for 1918. It is estimated that \$75,000 of the total \$79,500 for the United States under this item will be required for the rental of films for moving picture outfits at cantonment camps based on the supposition that 1,500 machines are purchased to accommodate the increase in the Army to 2,952,000 officers and men.

Philippine Islands.—The amount called for under this item is \$1,000. No estimate is made for fiscal year 1918.

Item military post exchanges 320.—Purchase of slides.

[Estimate fiscal year 1919, \$76,460.]

	United States.			Philippine Islands.			
	Current re-quire-ments.	New con-struction.	Total.	Current re-quire-ments.	New con-struction.	Total.	Grand total.
Estimate.....	\$76,100.00	.....	\$76,100.00	\$360.00	.....	\$360.00	\$76,460.00
Appropriated fiscal year 1918..	575.00	.....	575.00	360.00	.....	360.00	935.00
Expended fiscal year 1917.....	1,675.00	.....	1,675.00	106.10	.....	106.10	1,781.10

REMARKS.

United States.—The slides estimated for under this item are stereopticon slides used in the moving-picture machines purchased as a part of the chaplain equipment from funds of the fiscal year 1915 to constitute an amusement feature at the post. It is estimated that it will cost approximately \$15.15 per machine to provide slides for the 59 moving-picture machines used in the United States. Slides will cost about \$0.75 each and those for which the amounts stated will be used are intended as special feature slides. The amount estimated will provide for approximately 20 slides, and this will be only a part of those actually used at the post. The main cost will therefore be borne from the profits of the post exchange. It is estimated that \$75,000 of the total amount estimated under this item will be required for the purchase of slides for moving-picture-machine outfits, based on an assumption of 1,500 additional outfits being purchased to accommodate the increase in the Army to 2,952,000 officers and men.

Philippine Islands.—The amount \$360 under this item is that called for by Philippine authorities, and is to provide for the purchase of slides for moving-picture machines provided for the Philippine Islands in connection with chaplain's outfits. It is the same amount as estimated for the fiscal year 1918.

Item military post exchange 321.—Supplies for making repairs to moving-picture outfits.

[Estimate fiscal year 1919, \$63,285.]

	United States.			Philippine Islands.			Grand total.
	Current re-quire-ments.	New con-struction.	Total.	Current re-quire-ments.	New con-struction.	Total.	
Estimate.....	\$62,265.00	.....	\$62,265.00	\$1,020.00	.....	\$1,020.00	\$63,285.00
Appropriated fiscal year 1918..	1,325.00	.....	1,325.00	1,020.00	.....	1,020.00	2,345.00
Expended fiscal year 1917.....	3,950.00	.....	3,950.00	208.85	.....	208.85	4,158.85

REMARKS.

United States.—It will cost approximately \$35 or \$40 per machine to repair the 59 moving-picture machines provided for use in connection with the chaplain equipment for the United States. The amount estimated as being required for moving-picture machines at permanent posts is \$2,265, which is a slight increase over the estimated requirements for 1918, and is to allow for additional cost of repairs on account of advance of material, etc. Sixty thousand dollars of the total amount estimated under this item is estimated as being required for the repairs of moving-picture outfits based on the assumption that the 1,500 additional outfits will be purchased to accommodate the increase in the Army to 2,952,000 officers and men.

Philippine Islands.—One thousand and twenty dollars is called for by the department authorities under this item and is the same amount estimated for the fiscal year 1918. It is intended for making necessary repairs to the moving-picture machines in the Philippine Islands.

ROADS, WALKS, WHARVES, AND DRAINAGE.

The CHAIRMAN. The next item is, "Roads, walks, wharves, and drainage, \$3,043,443." There was appropriated under this item at the last session of Congress \$18,139,965, so that you are asking for only about one-sixth as much this year as you got at the last session of Congress.

Gen. SHARPE. I have tables giving the amount, and explaining the various items.

The CHAIRMAN. That gives information as to what you spent last year, and what you have contracted for to date?

Gen. SHARPE. Yes, sir.

Col. DALY. All the money under the appropriation for roads and walks has been spent. We have a large deficiency under that item.

Mr. ANTHONY. Where was that money spent, in making roads at the training camps largely?

Gen. LITTELL. At the training camps and posts.

The CHAIRMAN. What is the amount of the deficiency?

Gen. LITTELL. It is something over \$18,000,000.

Mr. ANTHONY. Can you put in the record a table or a statement giving the amount expended for roads and walks at each of the camps?

Gen. LITTELL. I can do that.

Mr. ANTHONY. What is the largest amount spent for roads and walks at any one of the camps?

Gen. LITTELL. You would like to have that amount stated for each post?

Mr. ANTHONY. Yes.

Gen. LITTELL. We have tables showing the amount expended for roads and walks, including drainage.

Mr. ANTHONY. Have you that arranged so that you can tell how much was spent at any one post for that purpose?

Gen. LITTELL. Yes, sir.

The following statement shows the total amounts expended at the various cantonments and camps up to and including the dates mentioned under the appropriation "Roads, walks, wharves, and drainage:"

National Army cantonments.

Location.	Date.	Roads, walks, wharves, and drainage.	Location.	Date.	Roads, walks, wharves, and drainage.
American Lake, Wash.....	Dec. 10	\$338,096	Fort Sam Houston, Tex.....	Nov. 30	\$498,343
Annapolis Junction, Md.....	Dec. 31	845,121	Little Rock, Ark.....	Nov. 15	635,568
Atlanta, Ga.....	Dec. 20	295,706	Louisville, Ky.....	Dec. 13	320,934
Ayer, Mass.....	Nov. 12	680,315	Petersburg, Va.....	Dec. 31	414,301
Battle Creek, Mich.....	Dec. 1	673,672	Rockford, Ill.....	Nov. 30	193,989
Chillicothe, Ohio.....	do.....	506,009	Wrightstown, N. J.....	do.....	343,962
Columbia, S. C.....	do.....	491,463	Yaphank, L. I.....	Nov. 15	763,308
Des Moines, Iowa.....	Dec. 8	518,690			
Fort Riley, Kans.....	Dec. 22	496,794	Total.....		8,036,271

(Following statement shows the total amounts expended at the various cantonments and camps up to and including the dates mentioned under the appropriation "Roads, walks, wharves, and drainage":)

National Guard camps.

Location.	Date.	Roads, walks, wharves, and drainage.
Augusta, Ga.....	Nov. 30	\$130,341
Deming, N. Mex.....	Dec. 15	151,334
Montgomery, Ala.....	Dec. 22	149,411
Spartanburg, S. C.....	Dec. 9	311,000
Waco, Tex.....	Dec. 15	165,426
Anniston, Ala.....	Dec. 14	246,321
Charlotte, N. C.....	Nov. 30	228,376
Houston, Tex.....	Dec. 5	172,050
Greenville, S. C.....	Dec. 1	164,944
Palo Alto, Cal.....	do.	90,232
Fort Sill, Okla.....	Dec. 15	345,208
Fort Worth, Tex.....	Dec. 1	125,426
Linda Vista, Cal.....	Nov. 30	425,144
Macon, Ga.....	Dec. 5	189,633
Hattiesburg, Miss.....	Dec. 1	623,205
Alexandria, La.....	do.	341,412
Total National Guard.....		3,859,523

The details of the estimate are as follows:

Roads, walks, wharves, and drainage, fiscal year 1919.

Deficiency act June 15, 1917.....	\$5,539,965
Deficiency act Oct. 6, 1917.....	12,000,000
Total.....	17,539,965

RECAPITULATION.

Estimate, "Roads, walks, wharves, and drainage," fiscal year 1919.

UNITED STATES AND PHILIPPINE ISLANDS.

Item No.	Purpose.	Appropriation fiscal year 1918.	Estimate for fiscal year 1919.			Estimate per capita 2,952,000 officers and en- listed men.
			Present strength.			
			Current require- ments.	New con- struction.	Total.	
322	Construction of roads.....	\$100,315.00		\$330,681.00	\$330,681.00	\$0.112
322a	Repairs to roads.....	155,000.00	\$727,500.00		727,500.00	.246
323	Construction of walks.....	50,000.00		66,655.00	66,655.00	.023
323a	Repairs to walks.....	25,000.00	153,217.00		153,217.00	.052
324	Construction of wharves.....	88,000.00		632,675.00	632,675.00	.214
324a	Repairs to wharves.....	61,000.00	84,000.00		84,000.00	.028
325	Employees, for the pay of.....	5,700.00	85,800.00		85,800.00	.029
326	Drainage, for the disposal of.....	45,000.00	284,643.00		284,643.00	.096
327	Dredging channels.....	10,000.00	54,734.00		54,734.00	.019
328	Care and improvement of grounds at military posts and stations...	55,000.00	623,580.00		623,580.00	.211
Total.....		595,015.00	2,013,474.00	1,030,011.00	3,043,485.00	1.030

Estimate "Roads, walks, wharves, and drainage," fiscal year 1919--Continued.

UNITED STATES.

Item No.	Purpose.	Appropriation fiscal year 1918.	Estimate for fiscal year 1919			Estimate per capita 2,952,000 officers and en- listed men.
			Present strength.			
			Current require- ments.	New con- struction.	Total.	
322	Construction of roads.....	\$100,300.00		\$305,681.00	\$305,681.00	\$0.104
322a	Repairs to roads.....	137,000.00	\$700,000.00		700,000.00	.239
323	Construction of walks.....	50,000.00		61,155.00	61,155.00	.021
323a	Repairs to walks.....	20,000.00	153,217.00		153,217.00	.052
324	Construction of wharves.....	88,000.00		299,675.00	299,675.00	.102
324a	Repairs to wharves.....	37,000.00	55,000.00		55,000.00	.019
325	Employees, for the pay of.....	2,700.00	82,800.00		82,800.00	.028
326	Drainage, for the disposal of.....	42,200.00	237,000.00	39,643.00	276,643.00	.094
327	Dredging channels.....	4,000.00	11,500.00	38,234.00	49,734.00	.017
328	Care and improvement of grounds at military posts and stations..	52,000.00	561,000.00	38,538.00	599,538.00	.204
Total.....		533,200.00	1,800,517.00	782,926.00	2,583,443.00	.880

RECAPITULATION.

Estimate "Roads, walks, wharves, and drainage," fiscal year 1919.

PHILIPPINE ISLANDS.

Estimate for fiscal year 1919.						
Item No.	Purpose.	Appropriation, fiscal year 1918.	Present strength.			Estimate per capita, 19,541 officers and enlisted men.
			Current requirements.	New construction.	Total.	
322	Construction of roads.....	\$15,000.00		\$25,000.00	\$25,000.00	\$1.279
322a	Repairs to roads.....	18,000.00	\$27,500.00		27,500.00	1.407
323	Construction of walks.....			5,500.00	5,500.00	.281
323a	Repairs to walks.....	5,000.00				
324	Construction of wharves.....			333,000.00	333,000.00	17.041
324a	Repairs to wharves.....	24,000.00	29,000.00		29,000.00	1.484
325	Employees, for the pay of.....	3,000.00	3,000.00		3,000.00	.154
326	Drainage, for the disposal of.....	3,000.00	8,000.00		8,000.00	.409
327	Dredging channels.....	6,000.00	5,000.00		5,000.00	.256
328	Care and improvement of grounds at military posts and stations.....	3,000.00	24,000.00		24,000.00	1.228
Total.....		77,000.00	96,500.00	363,500.00	460,000.00	23.539

R. W. W. & D. Item 322.- Construction of roads.

[Estimate fiscal year 1919, \$330,681.]

	United States.			Philippine Islands.			Grand total.
	Current require- ments.	New construc- tion.	Total.	Current require- ments.	New construc- tion.	Total.	
Estimate.....		\$305,681.00	\$305,681.00		\$25,000.00	\$25,000.00	\$330,681.00
Appropriated fiscal year 1918.....		100,300.00	100,300.00		15,000.00	15,000.00	100,315.00
Expended fiscal year 1917.....		83,866.89	83,866.89		56,900.00	56,900.00	140,766.89

REMARKS.

Supplies.—The supplies to be procured under this item consist of articles such as stone, cement, lime, and other class “D” articles as may be required to construct roads.

Services.—The services to be procured under this item consist of hire of laborers, etc., job and contract services for the construction of roads.

United States.—All funds under this item will be required exclusively for new construction. From the amount estimated for new construction in the United States, it is contemplated to do as much new construction as possible. The most essential projects which it is hoped can be carried out are:

Schofield Barracks, Hawaii, construction of roads	\$156,000
Fort Huachuca, Ariz., roads, walks, and drainage for new buildings recently constructed	15,750
Plattsburg Barracks, N. Y., reconstructing main highway through this reservation	18,000
Fort Sill, Okla., continuing the construction of roads, drains, etc.	30,000
West Point, N. Y., rebuilding with asphalt macadam surface road which is now in very bad condition	3,781
Fort Williams, Me., one road roller	3,263
Jeffersonville depot, additional trackage to the depot so that loading a second time may be unnecessary (3,000 feet)	11,250
Philadelphia depot, railroad siding	25,500
Fort Sheridan, Ill., resurfacing roads other than the Sheridan Road	30,000
Fort H. G. Wright, N. Y., construction and repair of roads	7,637
Total	305,681

Philippine Islands.—The amount estimated for (\$25,000), is the same as that submitted by the department authorities. It is \$10,000 more than the amount appropriated for the fiscal year 1918 and is \$31,900 less than the amount expended for the fiscal year 1917. It is estimated that this amount will be required for the construction of extensions to road systems in the several roads in the departments due to increase in garrison.

R. W. W. & D., Item 322a.—Repairs to roads.

[Estimate, fiscal year 1919, \$727,500.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate	\$700,000.00	.....	\$700,000.00	\$27,500.00	.....	\$27,500.00	\$727,500.00
Appropriated, fiscal year 1918	137,000.00	.....	137,000.00	18,000.00	.....	18,000.00	155,000.00
Expended, fiscal year 1917	107,079.61	.....	107,079.61	32,392.00	.....	32,392.00	139,471.61

REMARKS.

Supplies.—Under this subitem material and tools are purchased for the repair of roads.

Services.—Either job or contract services are procured under this subitem, whichever is available, considering the magnitude of the work and the conditions generally.

United States.—All funds under this subitem will be needed to meet current requirements, which is for the repair of existing roads at all military posts and stations and cantonments. The amount of the estimate is about \$592,920.39 greater than the cost for 1917, and \$563,000 greater than the apportionment for 1918. The increase is made necessary on account of the greater amount of roads to be taken care of; also on account of the calling into the Federal service of the National Army, National Guard, and the increase in the Regular Army. The estimate at stations other than for cantonments is based upon the estimate for 1918, plus a small increase due to the increase in the cost of material and labor. The estimate is as follows:

For stations other than for cantonments	\$200,000
For cantonments	500,000
Total	700,000

The estimate for cantonments is based upon one-half the per capita cost for 1918, multiplied by the number of men in the various cantonments.

Philippine Islands.—The amount of the estimate (\$27,500), is the same as called for by the department authorities. It is \$9,500 more than the amount appropriated for the fiscal year 1918 and \$4,892 less than the cost for the fiscal year 1917. The amount estimated for is for current repairs to roads at several posts in the department. The funds allotted for the fiscal year 1918 were insufficient to keep the roads in first-class condition and the funds called for, herewith, are the minimum that should be allowed.

R. W. W. & D., Item 323.—Construction of walks.

[Estimate fiscal year 1919, \$66,655.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....		\$61,155.00	\$61,155.00		\$5,500.00	\$5,500.00	\$66,655.00
Appropriated fiscal year 1918.....		50,000.00	50,000.00				50,000.00
Expended fiscal year 1917.....		8,279.05	8,279.05		10,000.00	10,000.00	18,279.05

REMARKS.

Supplies.—Under this item are purchased cement, lumber, lime, sand, gravel, etc., for the construction of walks.

Services.—Under this item job or contract services are procured and labor hired, as may be deemed necessary for the construction of walks.

United States.—The funds estimated for under this item will be used for new construction only. The amount is about \$52,875.95 more than the cost for 1917 and \$11,155 more than the apportionment for 1918. From the funds estimated for the United States it is contemplated to carry out as many projects as possible. Some of the more essential are:

Fort Mason, Cal., completing construction work at the Army supply depot,
paving, curbs, walks, steps, etc..... \$60,000
Fort McKinley, Me., concrete step and walk..... 1,155

Total..... 61,155

Philippine Islands.—The amount of the estimate (\$5,500) is the same as that called for by the department authorities. No estimate was submitted for this item under the fiscal year 1917. The amount estimated for is required for the construction of new walks at the several posts in the department as required by the ordinary improvement and increase of garrisons.

R. W. W. & D. Item 323-a.—Repairs to Walks.

[Estimate fiscal year 1919, \$153,217.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$153,217.00		\$153,217.00				\$153,217.00
Appropriated fiscal year 1918.....	20,000.00		20,000.00	\$5,000.00		\$5,000.00	25,000.00
Expended fiscal year 1917..	6,587.28		6,587.28	3,548.67		3,548.67	10,135.95

REMARKS.

Supplies.—The supplies to be procured under this subitem consist of lumber, nails, gravel, sand, cement, etc., needed to keep existing walks in repair during the fiscal year.

Services.—The method of handling these repairs is the same as for road repairs.
United States.—The funds estimated for will be required to meet current requirements. The estimate is about \$146,629.72 more than the cost for 1917 and about \$133,217 more than the apportionment for 1918. Old wooden walks require greater expenditures each year, therefore, this increase is thought to be necessary.
Philippine Islands.—No estimate is submitted for the fiscal year 1919.

R. W. W. & D. Item 324. Construction of wharves.

[Estimate fiscal year 1919, \$632,675.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....		\$299,675.00	\$299,675.00		\$333,000.00	\$333,000.00	\$632,675.00
Appropriated fiscal year 1918.....		88,000.00	88,000.00				88,000.00
Expended fiscal year 1917.....		34,719.20	34,719.20		38,500.00	38,500.00	73,219.20

REMARKS.

Supplies.—The supplies to be purchased under this item consist of lumber, nails, cement, etc., required in the construction of wharves.
Services.—The services under this item consist of the hire of labor or procurement of job or contract services as may be necessary for the construction of wharves.
United States.—The funds estimated for will be required exclusively for new construction. The estimate is based upon the estimate for 1918 with a slight increase on account of the increase of labor and materials and is about \$264,955.80 more than the cost for 1917 and about \$211,675 more than the apportionment for 1918. Furthermore, the increase is made necessary by the greater amount of new construction estimated for.
From the amount estimated for new construction in the United States, it is contemplated to undertake the following projects if possible:

Fort Caswell, N. C., moving boathouse to a new location.....	\$1,844.00
Honolulu, Hawaii, permanent reconstruction of wharf recently transferred from the Navy to the War Department.....	195,000.00
Fort Monroe, Va., strenghtening the main 12-inch I beams with creosoted yellow pine timber.....	4,257.00
Replacing 1½-inch rods in 273 bays of the structure at this post.....	7,781.00
Fort Standish, Mass., extending wharf.....	3,930.00
Fort Strong, Mass., derrick on quartermaster wharf.....	1,000.00
Fort Travis, Tex., construction of wharf.....	2,625.00
Charleston, S. C., construction of an extension to the North Pier of the Customhouse Wharf, and legislation authorizing transfer of the entire wharf to the control of the War Department from the Treasury Department.....	70,500.00
Fort Totten, N. Y., repairs to long wharf.....	5,738.00
Total.....	299,675.00

Philippine Islands.—The amount of the estimate (\$333,000) is the same as submitted by the department authorities. Our estimate was submitted for the fiscal year 1918 under this item. The amount requested for the fiscal year 1919 is in excess of the cost for the fiscal year 1917 by the amount of \$294,500. This increased amount estimated for is required as shown by notes submitted by the department authorities, viz:

Fort Mills and subposts.—Fort Hughes: For construction of new wharf of reinforced concrete, the present wooden wharf having entirely failed, supplies, \$18,000; services, \$9,000. This wharf is absolutely essential and the short life of the present wooden wharf constructed by the Corps of Engineers has demonstrated that a permanent structure is required.
Fort Mills: For construction of permanent wharf and breakwater, supplies, \$153,600; services, \$102,400. This is required to furnish accommodations for transports and

other boats that land at Fort Mills; the wharf to be so constructed that it will act as a breakwater for protection of all small crafts, including those in the mine-planter service, that are required to be stationed at Fort Mills, and the project should be undertaken in the fiscal year 1919 without fail. Garrison: A Thlrd, Engineers; First Company Second Aero Squadron, Ninth, Band, and 17 companies, Coast Artillery Corps, Thirteenth Infantry, Fifth and Eleventh Battalions, Philippine Scouts.

Ludlow Barracks: For reconstructing wharf with reinforced concrete; supplies, \$15,000; services, \$10,000. Garrison: Sixth and Eighth Battalions, Philippine Scouts. The present wooden wharf has failed entirely, making it necessary to handle all cargo by scows. It is desired to reconstruct with reinforced concrete the former wharf head. For extensions to present wharves at all posts in the department: Supplies, \$5,000; services, \$2,500. This sum is the average amount that has been required in previous years for the unforeseen new construction that is required to the wharves.

Piers A and B: For construction of concrete docking: Supplies, \$10,000; services, \$7,500. The present Piers A and B adjacent to the main transport Pier No. 1 have concrete piles and wooden dock, and it is the intention when funds are available to construct reinforced concrete docking on both of these piers thereby making them permanent.

R. W. W. & D. Item 324a.—Repairs to wharves.

[Estimate fiscal year 1919, \$81,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$55,000.00		\$55,000.00	\$29,000.00		\$29,000.00	\$84,000.00
Appropriated fiscal year 1918.....	37,000.00		37,000.00	24,000.00		24,000.00	61,000.00
Expended fiscal year 1917..	21,189.62		21,189.62	3,000.00		3,000.00	24,189.62

REMARKS.

Supplies.—The supplies to be purchased under this subitem consist of lumber, nails, cement, wire, etc., required to keep existing wharves in repair.

Services.—Either job or contract services are procured or labor hired as may be deemed most advantageous to the Government.

United States.—The funds estimated for will be required exclusively for current requirements. The amount is approximately \$33,810.38 more than the cost for 1917 and about \$18,000 greater than the apportionment for 1917. The increase is made necessary by the greater amount of repairs to be made. No funds are estimated for at cantonment camps.

Philippine Islands.—The amount of the estimate is the same as that submitted by the department authorities. It is \$5,000 more than the apportionment for 1918 and \$26,000 more than the cost for 1917. * The funds are required for repairs to all wharves in the department, supplies, \$20,000; services, \$9,000. Wharves are maintained at the following posts in the department:

- Fort Mills and all subposts.
- Fort San Pedro, Iloilo.
- Camp Eldredge.
- Sissiman Bay.
- Calumpit Point.
- Fort William McKinley.
- Fort Wint.
- Estado Mayor, Manila.
- Port Reservation, Manila (3).
- Camp Keithley.
- Camp Overton.
- Warwick Barracks.
- Medical Supply Depot.

R. W. W. and D. Item 325.—Employees, for the pay of.

[Estimate fiscal year 1919, \$85,800.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$82,800.00		\$82,800.00	\$3,000.00		\$3,000.00	\$85,800.00
Appropriated fiscal year 1918.....	2,700.00		2,700.00	3,000.00		3,000.00	5,700.00
Expended fiscal year 1917.....	31,534.98		31,534.98	3,000.00		3,000.00	34,534.98

REMARKS.

United States.—The amount estimated for is for current requirements and is necessary to cover the pay of one engineer on road roller at \$900 per annum, one laborer at \$600 per annum, and one laborer at \$720 per annum, making a total of..... \$2,220
For miscellaneous employees..... 2,380
Total..... 4,600

The funds estimated for will be required exclusively for current requirements. The amount is approximately \$51,265.02 more than the cost for the fiscal year 1917 and about \$81,100 greater than the apportionment for 1917. The estimate for the payment of miscellaneous employees at cantonment camps is submitted in the amount of \$78,200 under this item. This is based upon one-half the per capita cost for 1918, multiplied by the number of men in the various cantonments. The estimate is therefore, as follows:
For stations other than for cantonments..... \$4,600
For cantonments..... 78,200
Total..... \$82,800

Philippine Islands.—\$3,000 is the amount of the estimate called for by the department authorities. This is the same amount that was appropriated for the fiscal year 1918 and the cost for 1917.

R. W. W. & D., Item 326.—Drainage, for the disposal of.

[Estimate fiscal year 1919, \$284,643.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$237,000.00	\$39,643.00	\$276,643.00	\$8,000.00		\$8,000.00	\$284,643.00
Appropriated fiscal year 1919.....	32,000.00	10,000.00	42,000.00	3,000.00		3,000.00	45,000.00
Expended fiscal year 1917.....	18,626.31	9,313.16	27,939.47	9,000.00		9,000.00	36,939.47

REMARKS.

Supplies.—The supplies to be procured under this item consist of various materials to keep the existing drainage systems in repair, as well as to construct new systems.
Services.—Under this item are procured either job or contract services or labor hire as may be deemed to the best interests of the Government, considering the character and extent of the work.

United States.—The funds estimated for will be required both for new construction and current requirements, as follows:

For current requirements, for stations other than for cantonments.....	\$37, 000
For current requirements, for cantonments.....	200, 000
Total.....	237, 000

The estimate is about \$248,703.53 more than the cost for 1917 and about \$234,643 greater than the apportionment for 1918. The estimated cost at stations other than for cantonments is \$37,000. This estimate is based upon the estimate for 1918 with a slight increase due to the increase in cost of labor and material. The estimate for cantonments is \$200,000. This estimate is based upon one-half of the per capita cost for 1918, multiplied by the number of men in the various cantonments. The increase of this estimate is also due to the increase in the Regular Army, the mustering into the Federal Service of the National Guard and the National Army.

As much of the following new work as is possible will be carried out from the funds allowed for new construction under this item for the United States:

Fort Armstrong, Hawaii: Temporary repairs if undertaken will consist of filling all openings to the exposed face of the sea-wall with stone and concrete and resetting such capstones as need it, \$1,500.

R. W. W. & D. Item 327.—Dredging channels.

[Estimate fiscal year 1919, \$54,734.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$11,500.00	\$38,234.00	\$49,734	\$5,000.00	.....	\$5,000.00	\$54,734.00
Appropriated fiscal year 1918.....	4,000.00	.....	4,000.00	6,000.00	.....	6,000.00	10,000.00
Expended fiscal year 1917....	12,869.00	.....	12,869.00	.....	.....	.....	12,869.00

REMARKS.

Supplies.—None.

Services.—Under this item are procured contract services to keep the channels at the various posts dredged to their proper depth. The channels to most of the posts require dredging annually to maintain a depth sufficient for the harbor boats that ply in them.

United States.—All of the funds will be needed for current requirements. The amount of the estimate is \$36,865 more than the cost for 1917 and \$45,734 greater than the apportionment for 1918.

As much of the following new work as is possible will be carried out from the funds allowed for new construction under this item for the United States:

Fort Caswell, N. C., for services of a dredge to open channel and basin to boathouse.....	\$7,500
Fort Moultrie, S. C., dredging channel and wharf basin.....	30,734

Total..... 38,234

Philippine Islands.—The amount of the estimate (\$5,000) is \$1,000 less than the amount apportioned for 1918. No funds were apportioned for 1917, therefore no cost is reported. The funds are required for necessary derdging adjacent to the wharves in the Philippine Islands during the fiscal year 1919.

R. W. W. & D. Item 328. Care and improvement of grounds at military posts and stations.

[Estimate fiscal year 1919, \$623,580.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$561,000.00	\$38,538.00	\$599,538.00	\$24,000.00	.....	\$24,000.00	\$623,580.00
Appropriated fiscal year 1918.....	52,000.00	.....	52,000.00	3,000.00	.....	3,000.00	55,000.00
Expended fiscal year 1917.....	36,341.55	.....	36,341.55	14,500.00	.....	14,500.00	50,841.55

REMARKS.

Supplies.—The articles to be purchased under this item include trees, shrubbery, seed, sodding, and the necessary tools and implements for care of grounds.

Services.—The services to be procured consist of the hire of laborers, gardeners, etc., to keep the grounds in condition.

United States.—All funds will be required exclusively for current requirements. The estimate is about \$572,638.45 more than the cost for 1917 and \$568,580 greater than the apportionment for 1918. The estimated cost at stations other than for cantonments, and for cantonments is as follows:

For stations other than for cantonments.....	\$73,000
For cantonments.....	488,000
Total.....	561,000

This estimate is based upon one-half of the per capita cost for 1918, multiplied by the number of men in the various cantonments. The increase of this estimate is due to the increase in the Regular Army, the mustering into the Federal service of the National Guard and the National Army.

As much of the following new work as is possible will be carried out from the funds allowed for new construction under this item for the United States:

Front Royal Remount Depot, Va., removing timber, clearing underbrush, draining meadows, etc.....	\$6,000
Vancouver Barracks, Wash.:	
Clearing and grubbing 160 acres of land.....	21,600
Cutting 3,500 cords of wood.....	9,188
Hauling and ricking 3,500 cords of wood, at 50 cents.....	1,750
Total.....	38,538

Philippine Islands.—The amount estimated for (\$24,000) is the same as that submitted by the department authorities. It is \$21,000 more than the amount apportioned for the fiscal year 1918 and \$9,500 more than the cost for the fiscal year 1917. The funds are required for repair and improvement of grounds at all posts in the department; supplies, \$4,000; services, \$2,000. This is the minimum amount that should be allowed.

Fort Hughes (subpost to Fort Mills).—For the filling of a lagoon which is at such an elevation that it can not be drained into the sea and at present is a menace to the health of the command, services \$18,000. The corps of Engineers estimate that about 72,000 cubic yards of filling is required which it is the intention to obtain from the adjacent waters with a suction dredge.

BARRACKS AND QUARTERS.

The CHAIRMAN. I want to ask you a question in regard to the appropriation for barracks and quarters. There are a number of provisos there. Are any of those provisos new?

Col. DALY. Yes, sir; the proviso that reads:

Provided further, That the following described part of the naval reservation at Bishops Point, island of Oahu, Territory of Hawaii, is hereby transferred to and placed under the control and jurisdiction of the War Department for use for military purposes: Beginning at an iron bolt driven in the coral at the northwest corner of the Bishop Point Naval Reservation and running thence with the north line of the reservation by true azimuths and distances as follows: First, azimuth two hundred and ninety-three degrees forty-nine minutes four hundred and thirty feet to concrete monument: second, azimuth twenty-three degrees forty-nine minutes three hundred and seventy-five feet to the high-water line, and thence along the high-water line to the point of beginning: containing three acres, more or less: *Provided further*, That there is hereby reserved to the use of the Navy Department a right of way over the said military reservation from the remaining portion of the naval reservation on Bishops Point to and upon any landing which may be built from the shore of the military reservation to water of sufficient depth to permit naval launches to moor alongside the said landing.

That is a new item.

There is another one on page 45:

And provided further, That in time of war, or when war is imminent, the Secretary of War is hereby authorized, in his discretion, to rent or lease any building or part of building in the District of Columbia that may be required for military purposes.

That is new. That was asked for in the legislation that was presented to the Committee on Appropriations, but was not allowed. The reason for that is this: The law now requires that in order to rent buildings in the District of Columbia we must first get specific authority from Congress in advance for each particular building. There is no authority of law to create a deficiency in that, and in the operation of that law it has hindered the Secretary of War from providing necessary storage and office facilities, outside of the departmental service in the District of Columbia. We have no authority of law to rent additional storage facilities than what is specifically provided for in this act.

Mr. FIELDS. You have authority to rent office buildings, do you not?

Col. DALY. For the departmental service, but not for the department at large. We have offices here that are not a part of the departmental service. They are called offices for the department at large, such as the depot quartermaster, or the medical supply depot. Take the case of Washington Barracks, where we recently had a fire that destroyed the storehouse. We had to get another storehouse, and we have gotten one in the District of Columbia, but there is no authority of law for that.

The CHAIRMAN. You asked that last year of the Committee on Appropriations, and they refused it?

Col. DALY. They struck it out.

Gen. SHARPE. I think the reason they did not carry it in the bill was because it had not been included in the legislation that this committee had recently passed.

Mr. KAHN. General, I notice in many parts of the city signs out showing that the building is a part of the military establishment at this time.

Gen. SHARPE. Those are for the War Department.

Mr. KAHN. I understand. Do you pay the money for the rental of those buildings?

Gen. SHARPE. No, sir; that is paid out of an appropriation made in the sundry civil bill, for the use of the Secretary of War.

Mr. KAHN. Was that put in that bill as a war measure?

Gen. SHARPE. I do not think so.

Mr. KAHN. Would they have jurisdiction over that matter in peace times?

Gen. SHARPE. Yes, sir; they have jurisdiction over it.

Mr. KAHN. Have you had called to your attention, or has the Quartermaster General's Department had called to its attention the difficulty in finding quarters for the great number of clerks that have been coming to Washington, and has a proposition been made to you to construct barracks for those clerks?

Gen. SHARPE. I do not know of any proposition to construct barracks, but the matter has been brought up individually to our department, and I know it has been brought up in a more or less official way to the office of the Secretary of War. The clerks are all obtained through the Chief Clerk of the War Department.

Mr. KAHN. That is a very serious question.

Gen. SHARPE. That is a very serious question, sir.

Mr. KAHN. I have been told that the War Department is renting substantial apartment houses for office purposes, and now proposes to build barracks for sleeping purposes. It seems to me the better plan would be to use the well-constructed houses for sleeping purposes, and build barracks for office purposes.

Mr. ANTHONY. Is there a real emergency in the matter of housing Government clerks?

Gen. SHARPE. It is so reported to us.

Mr. ANTHONY. I notice in the advertising columns of the daily papers, two or three columns of advertisements offering rooms for rent in private houses to individuals. It does not seem to me there is any emergency.

Mr. FIELDS. Many times they carry those advertisements after the houses are full up.

Mr. KAHN. There is a real emergency.

Mr. ANTHONY. They certainly would not pay for the insertion of advertisements if they had no rooms to rent.

Gen. SHARPE. We only get individual reports from individual employees. The chief clerk of the War Department reported to me the other day the case of a young lady who arrived here to take an appointment as a clerk, and she was furnished with a list of some houses where quarters could be obtained. I think that list was gotten from the chamber of commerce. They have a committee there which furnishes the list.

She went to every one of these places and found out that while they did desire tenants some time before, that every one of the rooms had been rented, and she finally met some other young lady who had recently arrived here, and was given accommodations by her for the night, after having walked all around town and having gone to some 8 or 10 different places. Then she went down to the office from which she had obtained this list and struck off the places she had visited and where she knew it would be useless for anyone to go again looking for rooms.

Maj. OURY. I understood there was a request before the Committee on Appropriations for funds for building an office building for the various departments at a cost of \$3,000,000.

Mr. FIELDS. A young lady called at my office a few days ago. She was going from house to house looking for accommodations, and she

said to Mrs. Fields: "I have been to all of the houses advertising rooms, and to all I could find where they had a card in the window, and was not able to find a room, and now I am going from house to house to see if I can not find some private family who will take me in."

Col. DALY. We know it is a bad situation. We keep a list of the vacant rooms, and we furnish that list to all the new clerks who want rooms, and we know that when we do find vacant rooms very often the price is such that the clerks can not pay it.

Mr. SHALLENBERGER. Is it not true that what is most needed is a regulation of the prices of these rooms?

Col. DALY. Yes; the rooms that ordinarily rent for from \$10 to \$12 have now gone up to \$25 or \$30, and a clerk beginning at a thousand dollars a year can not afford to pay that rent.

Mr. MCKENZIE. Is it not true that it is much more difficult for young ladies to get rooms than it is for men?

Col. DALY. Yes.

Mr. ANTHONY. If we keep on increasing Government work here, we will soon have an army of 100,000 clerks for an army of a million men, and it looks to me as if we were overdoing it.

The CHAIRMAN. What have you to say in regard to the proviso in reference to Bishops Point?

Gen. SHARPE. That is in reference to the exchange of property between the Navy Department and the War Department.

The CHAIRMAN. That exchange was authorized by an act of Congress passed at the last session, was it not?

Col. DALY. No, sir; I think not.

The CHAIRMAN. I know we passed some act authorizing the Navy and the Army to make some exchange over there.

Col. DALY. We had an item in the bill, but this is a different proposition.

The CHAIRMAN. I wish you would explain the necessity for this proviso.

Col. DALY. The gist of it is in the letter of Col. Hunter, of December 16.

The CHAIRMAN. As I understand it, the transfer has already been made, and you just want congressional approval: that is the right of way that is provided for?

Col. DALY. Yes, sir.

BARRACKS AND QUARTERS, PHILIPPINE ISLANDS.

The CHAIRMAN. The next item is, "Barracks and quarters, Philippine Islands, \$4,266,830." At the last session of Congress you got an appropriation under that item of \$500,000.

Gen. SHARPE. I have a table giving the estimates, and then notes explaining each one of the items.

The CHAIRMAN. I wish you would put those in the record.

(The matter referred to is as follows:)

Estimate "Barracks and quarters, Philippine Islands," fiscal year 1919.

Item No.	Purpose.	Appropriation fiscal year 1918.	Estimate for fiscal year 1919.			
			Present strength.			Estimate per capita 19,541 officers and enlisted men.
			Current requirements.	New construction.	Total.	
329	Shelter and protection of officers and enlisted men.....	\$160,000.00		\$3,698,050.00	\$3,698,050.00	\$189.24600
330	Repairs.....	300,000.00	\$300,000.00		360,000.00	18.42300
331	Payments of rents.....	6,500.00	59,930.00		59,930.00	3.06700
332	Building sites.....					
333	Additions to existing military reservations.....		10,000.00		10,000.00	.51200
334	Shelter for animals and supplies.....	2,400.00		48,800.00	48,800.00	2.49700
335	All other buildings.....	18,000.00		90,050.00	90,050.00	4.60800
	Total.....	486,900.00	429,930.00	3,836,900.00	4,266,830.00	218.35300

B. & Q., P. I., Item 329.—Shelter and protection of officers and enlisted men.

[Estimate fiscal year 1919, \$3,698,050.]

Phillippine Islands (for new construction):

Estimate.....	\$3,698,050
Appropriated, fiscal year 1918.....	160,000
Expended, fiscal year 1917.....	185,000

REMARKS.

This estimate (\$3,698,050) is the amount called for by department authorities. It is \$3,538,050 more than the amount apportioned for the fiscal year 1918 and \$3,513,050 more than the cost for the fiscal year 1917. The funds called for are required for the following work, viz:

For screening all posts in the department. Supplies, \$20,000; services, \$10,000. Efforts have been made to complete the screening in all present buildings in the department, which is about 70 per cent completed. No funds are available for new construction that has been undertaken since the fiscal year 1916 and the sum stated in the minimum amount that should be allowed, so that this work of screening can continue, the system being to first screen all sleeping quarters and mess facilities, and, as funds become available, the remainder of the building.

Camp John Hay.—For the construction of a barrack for service corps men and other employees: Supplies, \$4,000; services, \$2,000.

Camp Stotsenburg.—For the construction of five double sets of noncommissioned officers' quarters building: Supplies, \$10,000; services, \$4,000. For the necessary plumbing, electric lighting, water and sewer connections: Supplies, \$900; services, \$350. For the construction of one double set of officers' quarters to replace building No. 59, which is past repair: Supplies, \$5,000; services, \$2,000. For the necessary plumbing, electric lighting, water and sewer connections: Supplies, \$1,000; services, \$400. For the construction of these three additions to barracks Nos. 314, 343, and 345: Supplies, \$2,500; services, \$1,200.

Fort Mills.—For construction of necessary barracks and quarters to complete the construction of a scout garrison: Supplies, \$17,000; services, \$9,000. The present nipa buildings were past repair in the fiscal year 1917 and are being rebuilt as funds become available; the sum asked for is the amount estimated that will be required to complete the project and includes one field officer's quarters. For the necessary plumbing, electric lighting, water and sewer connections: Supplies, \$3,400; services, \$1,800.

For construction of barracks for Hospital Corps: Supplies, \$20,000; services, \$10,000. The Quartermaster General advised in the fifth indorsement, dated December 21, 1916, No. 632-CR (Fort Mills), that Hospital Corps dormitory should be provided for from "Barracks and quarters, Philippine Islands" funds.

For San Pedro (Iloilo).—For construction of one double set of noncommissioned officers' quarters buildings: Supplies, \$2,000; services, \$1,000. For the necessary plumbing, electric lighting, water and sewer connections: Supplies, \$400; services, \$200. For construction of one barracks for Scout company building: Supplies, \$6,000; services, \$3,000. For the necessary plumbing, electric lighting, water and sewer connections: Supplies, \$1,400; services, \$600. It is estimated that one of the present temporary buildings will be past repair and require construction during the fiscal year.

Fort Wm. McKinley.—For construction of five double sets of noncommissioned officers' quarters buildings: Supplies, \$10,000; services, \$6,000. For the necessary plumbing, electric lighting, water and sewer connections: Supplies, \$2,000; services, \$1,200. These quarters are absolutely required to furnish accommodations for the noncommissioned staff officers entitled to quarters. For construction of barracks for service corps men building: Supplies, \$7,000; services, \$3,800. For the necessary plumbing, electric lighting, water and sewer connections: Supplies, \$1,400; services, \$800. For construction of barracks for provost guard building: Supplies, \$4,000; services, \$2,000. For the necessary plumbing, electric lighting, water and sewer connections: Supplies, \$800; services, \$400. There are no accommodations for the provost guard, and it will be necessary to construct a building sufficient to accommodate the members of the guard that are detached from their companies.

Manila.—Estado Mayor & Cuartel de Infanteria: For remodeling present buildings: Supplies, \$18,000; services, \$9,000. For the necessary plumbing, electric lighting, water and sewer connections: Supplies, \$3,600; services, \$1,800. The buildings at this post are of old Spanish construction, some of which were of very temporary character, and will require complete remodeling as the present arrangements are insanitary and the class of construction in no way suited for the accommodation of troops.

For the authorized increments to complete the Army:

Fort Wm. McKinley.—For construction of accommodations for three regiments of infantry, viz., barracks and quarters: Supplies, \$745,100; services, \$372,550. For the necessary plumbing, electric lighting, water and sewer connections: Supplies, \$172,000; services, \$86,000. For the necessary roads, walks, drainage, and improvement of grounds: Supplies, \$40,000; services, \$20,000. For constructions of accommodations for one aero company of Signal Corps, viz., barracks and quarters: Supplies, \$30,000; services, \$14,000. For the necessary plumbing, electric lighting, water and sewer connections: Supplies, \$9,000; services, \$4,000. For the necessary roads, walks, drainage, and improvement of grounds: Supplies, \$350; services, \$150. For construction of accommodations for one ambulance company, viz., for barracks and quarters: Supplies, \$11,400; services, \$5,700. For the necessary plumbing, electric lighting, water and sewer connections: Supplies, \$2,800; services, \$1,400. For the necessary roads, walks, drainage, and improvement of grounds: Supplies, \$3,200; services, \$1,800. For construction of accommodations for one field hospital company, viz., for barracks and quarters: Supplies, \$12,500; services, \$6,200. For the necessary plumbing, electric lighting, water and sewer connections: Supplies, \$2,750; services, \$1,400. For the necessary roads, walks, drainage, and improvement of grounds: Supplies, \$350; services, \$150. For construction of accommodations for one field company, Signal Corps, viz., for barracks and quarters: Supplies, \$29,800; services, \$14,900. For the necessary plumbing, electric lighting, water and sewer connections: Supplies, \$7,500; services, \$3,200. For the necessary roads, walks, drainage, and improvement of grounds: Supplies, \$350; services, \$150. For construction of accommodations for two Field Artillery Regiments, one heavy and one mountain, viz:

For barracks and quarters: Supplies, \$500; services, \$250,000. For the necessary plumbing, electric lighting, water and sewer connections: Supplies, \$111,000; services, \$35,000. For the necessary roads, walks, drainage, and improvement of grounds: Supplies, \$30,000; services, \$15,000. For construction of accommodations for one company of engineers, viz: For barracks and quarters: Supplies, \$24,700; services, \$12,300. For the necessary plumbing, electric lighting, water and sewer connections: Supplies, \$6,000; services, \$3,000. For the necessary roads, walks, drainage, and improvement of grounds: Supplies, \$10,700; services, \$5,300.

Fort Mills.—For construction of accommodations for battalion headquarters and two companies of engineers, viz: For barracks and quarters: Supplies, \$56,800; services, \$20,300. For the necessary plumbing, electric lighting, water and sewer connections: Supplies, \$13,800; services, \$6,900. For the necessary roads, walks, drainage, and improvement of grounds: Supplies, \$24,600; services, \$12,200.

Camp Stotsenburg.—For construction of accommodations for one regiment of cavalry, viz: For barracks and quarters: Supplies, \$267,000; services, \$133,000. For the

necessary plumbing, electric lighting, water and sewer connections: Supplies, \$65,800; services, \$32,800. For the necessary roads, walks, drainage, and improvement of grounds: Supplies, \$16,700; services, \$8,300. For construction of accommodations for one ambulance company, viz: For barracks and quarters: Supplies, \$12,000; services, \$6,000. For the necessary plumbing, electric lighting, water and sewer connections: Supplies, \$3,000; services, \$1,400. For the necessary roads, walks, drainage, and improvement of grounds: Supplies, \$400; services, \$200. For construction of accommodations for one field hospital company, viz: For barracks and quarters: Supplies, \$12,800; services, \$6,300. For the necessary plumbing, electric lighting, water and sewer connections: Supplies, \$3,100; services, \$1,500. For the necessary roads, walks, drainage, and improvement of grounds: Supplies, \$350; services, \$150. For necessary changes in present artillery post to accommodate one regiment of light artillery, viz: For barracks and quarters: Supplies, \$67,000; services, \$33,000. For the necessary plumbing, electric lighting, water and sewer connections: Supplies, \$30,000; services, \$15,000. For the necessary roads, walks, drainage, and improvement of grounds: Supplies, \$4,700; services, \$2,300. The present accommodations consist of 3 battery barracks and 11 sets of officers' quarters of concrete, the remainder of the post being of very temporary construction. The funds asked for will be utilized in the necessary repairs and remodelling of the present temporary quarters.

B. & Q., P. I., Item 330.—Repairs.

[Estimate fiscal year 1919, \$340,000.]

Philippine Islands (for current requirements):

Estimate.....	\$360,000
Appropriated fiscal year 1918.....	300,000
Expended fiscal year 1917.....	525,000

REMARKS.

The amount of this estimate is \$360,000. It is \$60,000 more than the amount apportioned for 1918 and \$165,000 less than the cost for the fiscal year 1917. The funds called for are required for current repairs to buildings at all posts in the Philippine Department. The remarks on page 118 of the hearings before the Military Affairs Committee of the Army appropriation bill for 1918 states the requirements clearly, and the additions asked for over the fiscal year 1918 are those required to accommodate the increments authorized or to be authorized.

B. & Q., P. I., Item 331.—Payment of rents.

[Estimate fiscal year 1919, \$59,930.]

Philippine Islands (for current requirements):

Estimate.....	\$59,930
Appropriated fiscal year 1918.....	6,500
Expended fiscal year 1917.....	10,000

REMARKS.

This is the same amount as called for by the department authorities. It is \$9,000 less than the cost for the fiscal year 1917 and \$5,500 less than the amount apportioned for 1919. No explanation is given for this decrease. There has been added \$58,930 under this item for the payment of rentals in China; therefore the total amount of this item for 1919 is \$59,930. The estimate under this item is made up as follows:

For payment of rents in Philippine Islands.....	\$1,000
For payment of rents for troops in China:	
Rental of barracks.....	53,000
Rental of quarters for noncommissioned officers and enlisted men.....	1,000
Rental of stables.....	600
Rental of storehouses.....	3,570
Rental of buildings for other military purposes.....	760
Total.....	59,930

B. & Q., P. I., Item 332.—Building sites.—No estimate for fiscal year 1919 submitted.

B. & Q., P. I., Item, 333.—Additions to existing military reservations.

[Estimated fiscal year 1919, \$10,000.]

Philippine Islands (for current requirements): Estimate, \$10,000.

REMARKS.

This is the amount of estimate submitted by the department authorities. No estimate was received for the fiscal year 1918, nor is any cost reported for the fiscal year 1917. It is estimated that these funds will be required for the purchase of private claims within certain military reservations that will be required so as to remove nuisances or purchase the land adjacent to target ranges, all within military reserve.

B. & Q., P. I., Item 334.—Shelter for animals and supplies.

[Estimated fiscal year 1919, \$48,800.]

Philippine Islands (for new construction):

Estimate.....	\$48,800
Appropriated fiscal year 1918.....	2,400
Expended fiscal year 1917.....	30,000

REMARKS.

The amount of this estimate (\$48,800) is \$18,800 more than the cost for the fiscal year 1917, and it is \$46,400 more than the amount apportioned for the fiscal year 1918. The funds are required for the following work:

Camp McGrath.—For necessary remodeling of the present storehouse and stables: Supplies, \$1,000; services, \$500.

Camp Stotsenburg.—For construction of quartermaster storehouse: Supplies, \$5,000; services, \$2,500. This is required to replace building No. 332, which is past repair. For galvanized-iron roofs for Cavalry stables and grooming sheds: Supplies, \$23,000; services, \$4,100. Stables Nos. 88, 92, 93, 94, 97, 98, and 99 and the grooming shed are now roofed with nipa, which is past repair. The remainder of the stables has been roofed with galvanized iron, and it is necessary to remove the menace from fire and the constant cost of repairs by replacing the present nipa roofs with galvanized iron. The funds asked for are the minimum that should be allowed. For construction of a wagon shed: Supplies, \$800; services, \$400. It is the intention to construct a shed for the shelter of animals at the corral for those animals that are required to remain in the harness awaiting local calls.

Fort Mills.—For construction of one quartermaster storehouse: Supplies, \$4,000; services, \$2,000. To facilitate the handling of supplies on the Infantry level a storehouse will be required for the Infantry regiment at Fort Mills. For construction of quartermaster stable, forage, and wagon shed: Supplies, \$3,000; services, \$1,500. The present accommodations for quartermaster stables, forage, and wagon shed are insufficient.

B. & Q., P. I., Item 335.—All other buildings.

[Estimate fiscal year 1919, \$90,050.]

Philippine Islands (for new construction):

Estimate.....	\$90,050
Appropriated, fiscal year 1918.....	18,000
Expended, fiscal year 1917.....	25,000

REMARKS.

This estimate for \$90,050 is the same as that submitted by the department authorities. It is \$65,050 more than the cost for the fiscal year 1917. It is noted that the Philippine Island authorities state that \$18,000 was estimated for the fiscal year 1918. However, as stated on page 119, hearings on the appropriation bill for 1918 states that no estimate was submitted for the fiscal year 1918. The funds estimated for are required for the following purposes:

Camp Stotsenburg.—For construction of one latrine and bath in quartermaster corral: Supplies, \$500; services, \$250. For the necessary extensions to wagon shed and ordnance magazine: Supplies, \$2,000; services, \$1,000. For construction of corral fences: Supplies, \$2,100; services, \$900. The funds asked for above are required

for the reason that there are no latrine facilities at the quartermaster corral and the wagon sheds will not accommodate the present equipment. The corral fences are past repair and originally consisted of a very makeshift construction from materials on hand. For construction of chapel: Supplies, \$13,000; services, \$7,000. In the fifth indorsement, from Office of the Quartermaster General, No. 631.4-CR (Camp Stotsenburg), the Quartermaster General stated that this project would be listed in his office for consideration.

Fort Mills.—For construction of two subguardhouses: Supplies, \$3,000; services, \$1,500. It is necessary to provide shelter for the guards stationed in the barrio at Fort Mills that are on duty for the protection of the wharves and the portion of the post at the new low level. The other building will be repaired for outpost No. 11, which is a considerable distance from the main garrison. For the construction of garage: Supplies, \$1,000; services, \$500. These funds are required to convert the corral on the "top side" into a garage for eight auto trucks. For construction of wagon shed: Supplies, \$2,000; services, \$800. For construction of two boathouses: Supplies, \$12,000; services, \$6,000. These proposed boathouses are for the accommodations of boats used in connection with the coast defenses of Manila and Subic Bays. At present there are no means for providing shelter for these boats. This estimate was forwarded from this department for the fiscal year 1918, but was not included in the estimate of Congress. For construction of a building to accommodate the female nurses on duty at hospital at this post: Supplies, \$7,000; services, \$3,500. This building was included in estimates of former years, but was never authorized, and is part of the project for a complete hospital at Fort Mills. At present there are no accommodations for female nurses.

Fort Wm. McKinley.—For construction of a building to accommodate the female nurses on duty at hospital at this post: Supplies, \$10,000; services, \$5,000.

Manila depot quartermaster.—For renewal of roofs on the depot buildings: Supplies, \$9,000; services, \$2,000. The present depot buildings were constructed to last a short time, and the present galvanized iron roof and part of the roof framing is absolutely in need of renewing, and unless funds are provided for that were estimated for by this department in previous fiscal years for construction of permanent depot buildings on the Manila Fort Reservation, the above funds will have to be supplied. The estimated cost of all the construction on the Fort Reservation, as submitted on previous estimate, amounts to \$250,000 and this department recommends that steps be taken to secure at least \$100,000 so that this work can be started, as it is feared that the present depot building may be destroyed by a typhoon at any time.

The CHAIRMAN. The amount you ask this year under this item is a tremendous increase over the amount you received at the last session of Congress. You are asking for a little over eight times the amount you got at the last session.

Gen. SHARPE. The notes show what it is proposed to construct.

The CHAIRMAN. What are the main items included in that large increase?

Gen. LITTELL. The new construction of Camp Hay for an increased number of troops, and also at Camp San Pedro. That is one of the best reservations in the Philippine Islands. It is a magnificent place for Cavalry troops, and it has been desired for a number of years to station most of the Cavalry there. In fact, they have practically all of the Cavalry stationed there. It is about 50 miles from Manila.

The buildings originally constructed there were of the most temporary kind, and they have been going to pieces for many years. A project was approved four or five years ago for the reconstruction of the post, and they started in to build a number of concrete buildings, beginning with the Artillery contingent. It is a good post for mounted troops. There are plenty of drill grounds; the reservation is a large one, and there is plenty of room for maneuvers and for target ranges for the artillery. This is for the purpose of replacing all of the old buildings, which are very much dilapidated. Some of them were built by soldier labor and Chinese carpenters. They are nothing but bare frames of buildings, covered with batten.

The CHAIRMAN. What is the amount of new construction at that camp?

Gen. LITTELL. There is another point in regard to that that I did not bring out, and that is that the increments of the Regular Army have been added, the last four increments have been added all at once, and that also requires additional quarters for the troops.

The CHAIRMAN. We were told when we passed the bill taking in the Philippine Scouts, that they practically did not have any troops there now, and that they were almost depleted of the Regular troops.

Gen. LITTELL. I think they have a good many troops there yet.

Mr. ANTHONY. They told us they had about 1,100, and those troops were largely Coast Artillery.

Mr. KAHN. Where is Camp Hay?

Gen. LITTELL. It is at a place called Baguio, up in the mountains in the northern part of the island.

The CHAIRMAN. None of this increase in the appropriation was asked for because of the provisions of the new legislation recently enacted, taking in the Philippine Scouts and the Constabulary?

Gen. LITTELL. No, sir.

Mr. McKENZIE. The fact that the Regular Army was increased to its full war strength by the addition of a number of increments provided in the national defense act would not make it necessarily follow that we have to build additional barracks in the Philippine Islands, would it?

Gen. SHARPE. This is asked for because the barracks were all constructed for the smaller-sized units. They were only to hold 98 men in the Infantry companies.

Gen. LITTELL. Then it was increased to 100, and then the strength was made 150, and then it was increased again to 200, and now there are 250 men in a company.

Mr. McKENZIE. That would mean an increase under the regulations in the size of the unit, but it would not necessarily follow that instead of having 10,000 troops in the Philippine Islands we would have about 20,000, would it?

The CHAIRMAN. On the contrary, during the war, we would have less.

Mr. McKENZIE. It seems to me there is not any connection between the increase of the Regular Army and the building of barracks in any particular locality in our jurisdiction.

Col. DALY. We have in these notes the details as to what the funds estimated are to be used for. They are not in concrete form, but they are in great detail. We can put in a statement showing the amount asked for in each place, and for what it is asked, so that the committee can readily see what we want the money for.

The CHAIRMAN. Is the proviso under this item an old proviso?

Col. DALY. Yes, sir; that is an old proviso.

SHOOTING GALLERIES AND RANGES.

The CHAIRMAN. The next item is, "Shooting galleries and ranges, \$343,110." The amount appropriated under this item at the last session was \$6,059,540, and you are asking for a much smaller amount this year, necessarily.

Gen. SHARPE. I have tables showing the total amount asked for with the division under the different items, and an explanation of the amounts required under the various items.
(The table referred to and the details of the estimate are as follows:)

Shooting galleries and ranges, fiscal year 1919.

Deficiency act Oct. 6, 1917..... \$6, 014, 540

RECAPITULATION.

Estimate "Shooting galleries and ranges," fiscal year 1919.

UNITED STATES AND PHILIPPINE ISLANDS.

em No.	Purpose.	Appropriation, fiscal year 1918.	Estimate for fiscal year 1919.			Estimate per capita, 2,952,000 officers and enlisted men.
			Current require- ments.	New construc- tion.	Total.	
349	Shelter for small-arms target practice...	\$1, 500. 00	.....	\$10, 400. 00	\$10, 400. 00	\$0. 004
350	Shooting galleries.....	1, 500. 00	.....	1, 500. 00	1, 500. 00	. 0005
351	Ranges for small-arms target practice...	.....	.....	21, 900. 00	21, 900. 00	. 007
352	Repairs incident thereto.....	33, 152. 00	\$168, 000. 00	.....	168, 000. 00	. 057
353	Expenses incident thereto.....	4, 000. 00	105, 600. 00	.....	105, 600. 00	. 086
354	Flour for paste for making targets.....	2, 848. 00	33, 210. 00	.....	33, 210. 00	. 011
355	Hire of employees.....	2, 000. 00	2, 500. 00	.....	2, 500. 00	. 0006
		45, 000. 00	309, 310. 00	33, 800. 00	343, 110. 00	. 1163

UNITED STATES.

349	Shelter for small-arms target practice.....	.....	.....	.....	.....	.....
350	Shooting galleries.....	.....	.....	.....	.....	.....
351	Ranges for small-arms target practice.....	.....	.....	.....	.....	.....
352	Repairs incident thereto.....	\$25, 652. 00	\$158, 000. 00	.....	\$158, 000. 00	\$0. 054
353	Expenses incident thereto.....	3, 000. 00	104, 000. 00	.....	104, 000. 00	. 035
354	Four for paste for making targets.....	2, 684. 00	33, 000. 00	.....	33, 000. 00	. 011
355	Hire of employees.....	.....	.....	.....	.....	.....
		31, 336. 00	295, 000. 00	.....	295, 000. 00	. 100

PHILIPPINE ISLANDS.

349	Shelter for small-arms target practice...	\$1, 500. 00	.....	\$10, 400. 00	\$10, 400. 00	\$0. 532
350	Shooting galleries.....	1, 500. 00	.....	1, 500. 00	1, 500. 00	. 077
351	Ranges for small-arms target practice...	.....	.....	21, 900. 00	21, 900. 00	1. 121
352	Repairs incident thereto.....	7, 500. 00	\$10, 000. 00	.....	10, 000. 00	. 512
353	Expenses incident thereto.....	1, 000. 00	1, 600. 00	.....	1, 600. 00	. 082
354	Four for paste for making targets.....	164. 00	210. 00	.....	210. 00	. 011
355	Hire of employees.....	2, 000. 00	2, 500. 00	.....	2, 500. 00	. 141
		13, 664. 00	14, 310. 00	33, 800. 00	48, 110. 00	2. 476

S. G. & R. Item 349.—Shelter for small-arms target practice.

[Estimate fiscal year 1919, \$10,400.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....					\$10,400.00	\$10,400.00	\$10,400.00
Appropriated fiscal year 1918.....					1,500.00	1,500.00	1,500.00
Expended fiscal year 1917.....		\$2,334.02	\$2,334.02		1,000.00	1,000.00	3,334.02

REMARKS.

United States.—No construction projects are listed to be done during the fiscal year 1919.

Philippine Islands.—The estimate called for by department authorities under this item (\$10,400) is to provide for the replacement of rang houses and the construction of new ones where required in the several posts in the department; supplies, \$2,000; services, \$900. The increase over the estimate for 1918 is due to the recall of the funds originally allotted the department for the fiscal year 1917.

Fort Mills.—For construction of shelter for target range: Supplies, \$5,000; services, \$2,500.

S. G. & R. Item 350.—Shooting galleries for small-arms target practice.

[Estimate, fiscal year 1919, \$1,500.]

Philippine Islands (for new construction):

Estimate.....	\$1,500
Appropriated fiscal year 1918.....	1,500

REMARKS.

United States.—No projects are listed to be done under this item for the fiscal year 1918.

Philippine Islands.—The amount estimated for by the Philippine authorities under this item is \$1,500, which is the same as that estimated for 1918. No cost is reported for 1917.

The amount estimated for is required for replacement of buildings used as shooting galleries and for the construction of new ones where required at all posts in the Philippine Department.

S. G. & R. Item 351.—Ranges for small-arms target practice.

[Estimate fiscal year 1919, \$21,900.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....					\$21,900.00	\$21,900.00	\$21,900.00
Appropriated fiscal year 1918.....							
Expended fiscal year 1917....		\$18,420.65	\$18,420.65				18,420.65

REMARKS.

United States.—No estimate for the fiscal year 1919.

Philippine Islands.—\$21,900 is estimated as being required by the department authorities for fiscal year 1919. Nothing was estimated for under this item for the fiscal years 1918 or 1917.

The above amount is required for necessary increases required for the several ranges in the department due to the increase of garrison by increments for all posts affected: Supplies, \$9,000; services, \$6,000.

Camp John Hay.—For reconstruction of a range at that post: Supplies, \$2,300; services, \$1,500.

Camp Stotsenburg.—For necessary retaining walls and additional pit houses at the several butts: Supplies, \$800; services, \$400.

Augur Barracks.—Concrete bases for targets: Supplies, \$200; services, \$100.

Camp Overton.—For construction of butts: Supplies, \$1,000; services, \$600.

S. G. & R. Item 352.—Repairs incident thereto.

[Estimate fiscal year 1919, \$168,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$158,000.00	.....	\$158,000.00	\$10,000.00	.....	\$10,000.00	\$168,000.00
Appropriated fiscal year 1918.....	25,652.00	.....	25,652.00	7,500.00	.....	7,500.00	33,152.00
Expended fiscal year 1917.....	13,918.27	.....	13,918.27	4,685.00	.....	4,685.00	18,603.27

REMARKS.

The sum of \$25,652 appropriated for this item for the fiscal year 1918. The amount estimated for stations other than for cantonments is based upon the estimate for 1918 plus a slight increase for material and labor. The estimate for 1919 is as follows:

Henry Barracks, P. R.—Repair of target ranges.....	\$3,000
For stations other than for cantonments.....	30,000
For cantonments.....	125,000

Total.....	158,000
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The amount estimated for cantonments is based upon one-half the per capita cost for 1918 multiplied by the number of men in the various cantonments.

The supplies to be purchased consist of lumber, stone, cement, and such other articles as may be required to repair butts, markers, building on ranges, etc.; also necessary tools, lawnmowers, etc., required to keep the grounds in a suitable condition for target practice.

The services to be provided consist of both job and contract services required in making necessary repairs to ranges and buildings such as storehouses for target material, telephone booths, shelter for markers, indoor shooting galleries, etc.

United States.—Estimates for repairs to ranges, etc., are submitted with the annual estimates of March 1, and a separate estimate, and are considered in connection with the annual estimates and apportionments made to the various departments at the beginning of the fiscal year. Special requisitions are also received through the year for the necessary repairs which could not be anticipated when annual allotment is made.

All of the above amounts will be required to meet current requirements.

The amount estimated for is the minimum amount that will be required to keep the various ranges in repair.

Philippine Islands.—The amount submitted by the department authorities under the item is \$10,000 and is required for current repairs to ranges at all posts in the department. The increase over 1918 estimate is made necessary by the additional increments.

It is an increase of \$2,500 over the estimate for fiscal year 1918. Explanation of increase is not given.

S. G. & R. Item 353.—Expenses incident thereto.

[Estimate fiscal year 1919, \$103,800.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$104,000.00		\$104,000.00	\$1,600.00		\$1,600.00	\$105,600.00
Appropriated fiscal year 1918.....	3,000.00		3,000.00	1,000.00		1,000.00	4,000.00
Expended fiscal year 1917.....	2,227.48		2,227.48	500.00		500.00	2,527.48

REMARKS.

United States.—The services to be procured under this item consist of the rental of land for target practice and for all other services not otherwise provided for incident to the operations of target ranges, etc.

This estimate is based upon the estimate for 1918 plus a small increase for labor and material, and is as follows:

For stations other than for cantonments.....	\$35,000
For cantonments.....	69,000
Total.....	104,000

The estimate for cantonments is based upon one-half the per capita cost for 1918 multiplied by the number of men in the various cantonments.

The following target ranges were rented during the fiscal year 1917:

Brownsville, Tex.....	\$1.00
Clackamas, Oreg.....	2,499.97
Colchester, Vt.....	276.00
Edsall, Va.....	750.00
Total.....	3,476.97

In view of war conditions, all of the sum estimated for will be required to meet current requirements.

Philippine Islands.—The amount of the estimate under this item as submitted by the Philippine authorities is \$600 more than that estimated for the fiscal year 1918. No explanation is given for the increase.

Item 354, S. G. & R.—Flour for paste for making targets.

[Estimate fiscal year 1919, \$33,210.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$33,000		\$33,000	\$210		\$210	\$33,210
Appropriated fiscal year 1918.....	2,684		2,684	164		164	2,848
Expended fiscal year 1917.....	800		800	82		82	882

REMARKS.

The above estimate is in accordance with paragraph 1215, item 8, Army Regulations, 1913, which is as follows:

“Flour: For paste used in target practice. For each troop or company, 50 pounds, and for each battery of Field Artillery, 100 pounds, during the practice season.”

United States.—This estimate is as follows:

For stations other than for cantonments.....	\$8,000
For cantonments.....	25,000
Total.....	33,000

The estimates for cantonments is based upon one-half the per capita cost for 1918 multiplied by the number of men in the various cantonments. The increase of this estimate is due to war conditions and to the increase in the advance in cost of flour.

Philippine Islands.—\$210 is estimated for under this item, an increase of \$45.50 over the 1918 estimate. It is required for the supply of flour for making paste, used for making targets at the various ranges at posts in the Philippine Department.

Item 355, S. G. & R.—Hire of employees.

[Estimate fiscal year 1919, \$2,500.]

	United States.			Philippine Islands.			Grand total.
	Current requirements	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....				\$2,500		\$2,500	\$2,500
Appropriated fiscal year 1918.....				2,000		2,000	2,000
Expended fiscal year 1917.....				1,251		1,251	1,251

REMARKS.

United States.—No estimate is submitted under this item.

Philippine Islands.—The Philippine authorities estimate for \$2,500, which is \$500 more than the amount appropriated for the fiscal year 1918. No explanation is given as to this increase.

The CHAIRMAN. How do you arrive at that amount for shooting galleries at this time?

Gen. SHARPE. That is figured on a per capita of \$11.63 for 2,952,000 men. That is practically based on an army of 3,000,000 men.

The CHAIRMAN. Last year you got over \$6,000,000 and now you are only asking for a little over \$343,000.

Maj. OURY. The amount appropriated last year was required for fitting up 32 ranges. A good deal of the amount of the item in the previous bill, covering shooting galleries and ranges was for leases. I think there was approximately \$2,000,000 for that purpose. That is not yet entirely expended, although it is probably all obligated for the different National Army and the National Guard camps. When that is expended, the amount that is necessary to maintain and keep up these galleries and ranges will be nothing like as large as the amount asked for in that item under previous appropriation bills. This is largely for maintenance, and not for new construction.

The CHAIRMAN. Then you will not have any new construction?

Maj. OURY. Practically every regular post has its old target range. For the National Army and the National Guard camps it was necessary to construct new ones. They have been built at a cost varying from fifty to one hundred thousand dollars. I believe that we have had to pay \$500,000 for leases in the Central Department, and that amount is for leases on those particular ranges that are all located in the Central Department.

The CHAIRMAN. I wish you would put in the record a statement showing exactly what you spent on these ranges, and how you arrived at this amount of \$343,000.

Maj. OURY. We can do that.

Col. DALY. We have that under each item, covering the estimate for \$343,107.

(The matter referred to is as follows:)

There has been expended to date, under the appropriation "Shooting galleries and ranges," for target ranges at the various cantonments, \$2,700,500.50 as follows:

NATIONAL ARMY CANTONMENTS.

Camp Devens, Ayer, Mass.....	\$58,000.00
Camp Upton, Yaphank, L. I.....	52,115.00
Camp Dix, Wrightstown, N. J.....	111,100.00
Camp Meade, Annapolis Junction, Md.....	50,865.00
Camp Lee, Petersburg, Va.....	50,000.00
Camp Jackson, Columbia, S. C.....	52,000.00
Camp Gordon, Atlanta, Ga.....	85,500.00
Camp Sherman, Chillicothe, Ohio.....	50,000.00
Camp Taylor, Louisville, Ky.....	75,000.00
Camp Custer, Battle Creek, Mich.....	52,004.00
Camp Grant, Rockford, Ill.....	40,000.00
Camp Pike, Little Rock, Ark.....	50,000.00
Camp Dodge, Des Moines, Iowa.....	50,000.00
Camp Funston, Fort Riley, Kans.....	50,000.00
Camp Travis, Fort Sam Houston, Tex.....	50,000.00
Camp Lewis, American Lake, Wash.....	51,175.50
	<hr/>
	927,759.50

NATIONAL GUARD MOBILIZATION CAMPS (M. F. S.)

Camp Greene, Charlotte, N. C.....	129,200.00
Camp Wadsworth, Spartanburg, S. C.....	147,900.00
Camp Hancock, Augusta, Ga.....	119,000.00
Camp McClellan, Anniston, Ala.....	144,500.00
Camp Sevier, Greenville, S. C.....	95,200.00
Camp Wheeler, Macon, Ga.....	94,850.00
Camp MacArthur, Waco, Tex.....	105,500.00
Camp Logan, Houston, Tex.....	85,000.00
Camp Cody, Deming, N. Mex.....	108,800.00
Camp Doniphan, Fort Sill, Okla.....	112,200.00
Camp Bowie, Fort Worth, Tex.....	105,400.00
Camp Sheridan, Montgomery, Ala.....	112,200.00
Camp Shelby, Hattiesburg, Miss.....	163,500.00
Camp Beauregard, Alexandria, La.....	74,800.00
Camp Kearney, Linda Vista, Cal.....	92,091.00
Camp Fremont, Menlo Park, Palo Alto, Cal.....	81,600.00
	<hr/>
	1,772,741.00

Gross total..... 2,700,500.50

Under this appropriation the total amount estimated for the fiscal year 1919 is \$343,110, of which amount \$33,800 is for new construction and \$309,310 for current requirements.

The construction estimated for items 349-350 and 351 are entirely for use in the Philippine Islands. Item 352, calling for \$168,000, is for repairs incident to shooting galleries and ranges, of which \$10,000 is required for the Philippine Islands and \$158,000 for the United States. Of this latter amount, \$125,000 is estimated as being required for cantonments in the United States based upon one-half the per capita cost for 1918 multiplied by the number of men in the various cantonments estimated to be approximately 1,200. Item 353, calling for \$105,600, is for expenses incident to shooting galleries and ranges in the United States and Philippine Islands, of which \$1,600 is required for the Philippine Islands, and \$104,000 for the United States. Of this latter amount, \$69,000 is estimated as required for the various cantonments based upon one-half the per capita cost for 1918 multiplied by the number of men in the various cantonments. Item 354 calls for \$33,210, of which \$33,000 is required for the

United States, \$25,000 of which is for the use of the various cantonments, based upon one-half the per capita cost for 1918 multiplied by the number of men in the various cantonments. Item 355 is for the hire of employees in the sum of \$2,500, which is estimated entirely for the Philippine Islands.

Answering the fourth paragraph of memorandum you are informed that there was nothing estimated for the lease of target ranges for use at cantonments at the time this estimate was prepared, there being no data on hand to determine the amount required. One million dollars should be called for under item 353 of this appropriation under the item "Expenses incident thereto," based upon information recently received from the National Army and National Guard cantonments, and for additional camps and stations that may be established in the future. This will make a total of \$1,105,600 for this item and \$1,343,110 for the entire appropriation.

MAINTENANCE, ARMY WAR COLLEGE.

The CHAIRMAN. The next item is "Maintenance, Army War College: For supplying the necessary fuel for heating the Army War College Building at Washington Barracks, and for lighting the building and grounds; also for pay of a chief engineer at \$1,400; an assistant engineer, at \$900; carpenter, at \$1,000; four firemen, at \$720 each; one elevator conductor, at \$720; in all, \$12,200." There is a slight increase there over the amount of \$10,700 appropriated at the last session of Congress.

Gen. SHARPE. The total amount asked for is \$12,780. There is a supplemental estimate of \$500 additional.

Col. DALY. The original estimate was for \$12,200.

Gen. SHARPE. The supplemental estimate provides for an increase in the pay of the assistant engineer to \$1,000, and then the four firemen are to be increased from \$720 to \$840. As I say, there are four of those firemen and that makes an increase of \$100 in the pay of the assistant engineer and an increase of \$480 in the pay of the firemen.

The CHAIRMAN. You are asking for an increase in what?

Gen. SHARPE. We are asking for an increase in the pay of one assistant engineer and four firemen. The assistant engineer is getting \$100 increase in his pay, and the four firemen are to get an increase of \$120.

Col. DALY. In addition to that, there is a carpenter put in at \$1,000, who was not in the 1918 appropriation.

The CHAIRMAN. That accounts for the total of \$12,780?

Col. DALY. There are other items included in that.

Mr. McKENZIE. What is the necessity for the employment of a carpenter, especially down there? You have carpenters in your department, have you not?

Gen. SHARPE. We have them only for posts. The War College is treated as if it were a part of the War Department. At the barracks there we have enlisted carpenters of our department stationed, but we do not have them in the War College.

Mr. ANTHONY. Is there sufficient carpentry work down there to keep a carpenter busy?

Gen. SHARPE. That request came from the president of the War College.

Mr. ANTHONY. What do the firemen do; do they attend to the heating of the building?

Gen. SHARPE. Yes, sir.

Mr. ANTHONY. Do they supply their own light at the War College, or do they buy the light?

Col. DALY. I think they generate their light.

Mr. KAHN. In the language of the item it says, "For lighting the building and grounds." And that is one of the purposes of the appropriations?

Gen. LITTELL. That is for the purpose of buying the material and the cost of purchasing the light.

Mr. ANTHONY. I wondered whether they had a generator there or not.

Gen. LITTELL. It is purchased.

Mr. ANTHONY. How do they use four firemen there?

Gen. LITTELL. They have a pumping plant there, and that increase was put in by direction of the Chief of Staff.

Mr. SHALLENBERGER. There is just one building there that they have to heat?

Gen. LITTELL. Yes, sir. The increases were put in by direction of the Chief of Staff.

Estimate for the fiscal year, 1919, "Maintenance Army War College."

RECAPITULATION.		
No.	Item.	Supplies or services.
356	Fuel (supplies).....	\$3,300.00
357	Light (supplies).....	2,000.00
358	Chief engineer (services).....	1,400.00
359	Assistant engineer (services).....	900.00
359a	Carpenter (services).....	1,000.00
360	Firemen (services).....	2,880.00
361	Elevator conductor (services).....	720.00
Total.....		12,200.00
Supplemental, fiscal year 1919.		580.00
		12,780.00

Pay, Army War College.

Designation.	Appropriation, 1918.			Estimated, 1919.		
	Num-ber.	Per an-num.	Total.	Num-ber.	Per an-num.	Total.
Chief engineer.....	1	\$1,400	\$1,400	1	\$1,400	\$1,400
Assistant engineer.....	1	900	900	1	900	900
Carpenter.....	1			1	1,000	1,000
Firemen.....	4	720	2,880	4	720	2,880
Elevator conductor.....	1	720	720	1	720	720
Total.....	7		5,900	8		6,900
						580
						7,480

Supplemental to increase to \$1,000.....

Supplemental to increase to \$840.....

\$100

480

580

Item 356. M. A. W. C. Fuel.

[Estimate fiscal year 1919, \$3,300.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New con-struction.	Total.	Current require-ments.	New con-struction.	Total.	
Estimate.....	\$3,300		\$3,300				\$3,300
Appropriated fiscal year 1918....	2,800		2,800				2,800
Expended fiscal year 1917.....	3,109		3,109				3,109

REMARKS.

Fuel is furnished to the Army War College under annual contract.

Item 357, M. A. W. C.—Light.

[Estimate fiscal year 1919, \$2,000.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New con-struction.	Total.	Current require-ments.	New con-struction.	Total.	
Estimate.....	\$2,000		\$2,000				\$2,000
Appropriated fiscal year 1918....	1,900		1,900				1,900
Expended fiscal year 1917.....	1,100		1,100				1,100

REMARKS.

Light is furnished to the Army War College by electric current furnished by the local electric company.

Item 358, M. A. W. C.—Chief engineer.

[Estimate fiscal year 1919, \$1,400.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New con-struction.	Total.	Current require-ments.	New con-struction.	Total.	
Estimate.....	\$1,400		\$1,400				\$1,400
Appropriated fiscal year 1918....	1,400		1,400				1,400
Expended fiscal year 1917.....	1,400		1,400				1,400

REMARKS.

This item provides for salary of one chief engineer on duty at the Army War College.

Item M. A. W. C. 359.—Assistant engineer.

[Estimate fiscal year 1919, \$900.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$900	.....	\$900	.....	.....	.....	\$900
Appropriated, fiscal year 1918.....	1,000	.....	1,000	.....	.....	.....	1,000
Expended, fiscal year 1917.....	1,000	.....	1,000	.....	.....	.....	1,000

REMARKS.

This item provides for the salary of one assistant engineer on duty at the Army War College.

Item M. A. W. C. 359a.—Carpenter.

[Estimate fiscal year 1919, \$1,000.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$1,000	.....	\$1,000	.....	.....	.....	\$1,000
Appropriated, fiscal year 1918.....	.....	.....	.....	.....	.....	.....	.....
Expended, fiscal year 1917.....	.....	.....	.....	.....	.....	.....	.....

REMARKS.

This item provides for the salary of one carpenter on duty at the Army War College.

Item 360, M. A. W. C.—Firemen.

[Estimate fiscal year 1919, \$2,880.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$2,880	.....	\$2,880	.....	.....	.....	\$2,880
Appropriated fiscal year 1918.....	2,880	.....	2,880	.....	.....	.....	2,880
Expended fiscal year 1917.....	2,880	.....	2,880	.....	.....	.....	2,880

REMARKS.

* This item provides for the salary of four firemen on duty at the Army War College. Rate of pay, \$720 per annum.

Item 361, M. A. W. C.—Elevator conductor.

[Estimate fiscal year 1919, \$720.]

	United States.			Philippine Islands.			Grand total.
	Current requirements.	New construction.	Total.	Current requirements.	New construction.	Total.	
Estimate.....	\$720	.....	\$720	.....	.....	.....	\$720
Appropriated fiscal year 1918....	720	.....	720	.....	.....	.....	720
Expended fiscal year 1917.....	720	.....	720	.....	.....	.....	720

REMARKS.

This item provides for the salary of one elevator conductor on duty at the Army War College.

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF STAFF,
Washington, January 2, 1918.

Memorandum for the Chief of Staff:
Subject: Increase in pay of assistant engineer and firemen at Army War College.

1. The appropriation "Maintenance, Army War College," as submitted to Congress for the fiscal year 1919, provides among other things for the pay of an assistant engineer at \$900, and of four firemen at \$720 per annum.

2. When the estimate of this appropriation was prepared in August, 1917, it was not foreseen that any difficulty would be experienced in getting qualified men for these positions at the compensations named. Since that time, however, the War College has lost the services of several of its experienced men who have resigned to accept positions on the outside at greatly increased wages over that which they were receiving from the Government. In view of the keen competition existing in the labor market at the present time and the mounting cost of living there would seem to be no other alternative than to give these men an increase in pay if we are to obtain, and to be able to hold after they are obtained, men who are competent to fill these positions.

3. It is accordingly recommended that the pay of the assistant engineer at the War College be increased from \$900 to \$1,000 per annum, and of the four firemen from \$720 to \$840 per annum for the fiscal year 1919.

4. Draft of memorandum to the Quartermaster General to carry this recommendation into effect herewith.

D. W. KETCHAM,
Colonel, General Staff,
Acting Chief of War College Division.

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF STAFF,
Washington, January 4, 1918.

Memorandum for the Quartermaster General:
The Secretary of War directs that in connection with the appropriation "Maintenance, Army War College, 1919," a special estimate be submitted to Congress increasing the pay of the assistant engineer from \$900 to \$1,000 per annum, and of the four firemen from \$720 to \$840 per annum.

JOHN BIDDLE,
Major General, Acting Chief of Staff.

RENT OF BUILDINGS, QUARTERMASTER CORPS.

The CHAIRMAN. The next item is, "Rent of buildings, Quartermaster Corps: For rent of buildings, and part of buildings in the District of Columbia for military purposes during the fiscal year 1919, \$100,015.10." The appropriation at the last session of Congress was \$79,100, so that there is an increase of nearly \$25,000 in that item. Where does that increase come in?

Gen. SHARPE. I have a list giving the designations of the buildings which were appropriated for in 1917 and 1918 and also what is contemplated in the estimates for this year. There is a decrease for the rent of the laboratory for the Signal Corps.

The CHAIRMAN. The amount asked for is \$2,100 this year.

Col. DALY. We have here a comparison of the rentals. There is increase in one item of \$48,000 for the rental of the medical warehouse, medical supply depot, a new building constructed especially for the medical supply depot, and taken under a six-year lease. That building was completed in October. The Committee on Appropriations appropriated in the deficiency act \$36,000, covering the rental of that building for the balance of the fiscal year. The rental is \$4,000 a month. That is an additional item of \$48,000.

Mr. ANTHONY. What return to the owner of the property is that rental based upon? Do you know the cost of that building? That was constructed especially for the Government—for the use of the Government—the entire building?

Col. DALY. Yes, sir.

Mr. ANTHONY. What is the cost of the building and the value of the ground?

Col. DALY. We are paying 28.4 cents a square foot for that building. The space rented is 192,000 square feet.

Mr. FIELDS. Is that the floor space?

Col. DALY. Yes. The assessed valuation of the building and land is \$361,249.

Mr. ANTHONY. So that the owner will almost get the value of the property back under the six years' rental agreement?

Col. DALY. Yes, sir. Then there is an increase in the estimate of \$2,000 for additional space for the medical school, \$7,200 for the rental of the Lemon Building. That rental was formerly paid by the War Department from their appropriation. But they have vacated the building and turned it over to the Quartermaster Department and we are assuming the rent.

Mr. ANTHONY. Would it not have been better business for the Government to have built a medical storehouse?

Col. DALY. I should think so. The next increase is for space for the aviation section of the Signal Corps, \$1,320. A laboratory for the Signal Corps, \$4,938 for a warehouse and \$510 for a corral.

Mr. KAHN. Those are increases?

Col. DALY. Those are increases.

Mr. QUIN. How many cars are in the garage for which you pay a rental of \$1,500?

Col. DALY. I do not know. I will have to find that out and put it in the record.

NOTE.—There are 22 cars in the garage, including 6 belonging to the White House.

Then there is a warehouse at \$4,938. That is an additional warehouse located at 1514 Eckington Place, rented for the depot quartermaster. The available space there for Government use is 57,184 square feet. The assessed valuation of the building ground is \$50,449 and the monthly rental is \$411.50.

The corral, for which a rental of \$510 is asked, is located at the southwest corner of Nineteenth Street and Virginia Avenue, and is rented for the depot quartermaster. It has 24,357 square feet. The assessed valuation of the building and ground is \$19,745.

The CHAIRMAN. Why do you call it a corral?

Col. DALY. It is a small building, and it is inclosed with a fence and the animals are put in there for exercise.

Mr. KAHN. Does the Government occupy the entire warehouse at 1514 Eckington Place, or only a part of it?

Gen. SHARPE. The entire building is occupied by the Government.

Mr. KAHN. Is that the total rent you pay for it?

Gen. SHARPE. Yes, sir.

The CHAIRMAN. I will ask you to put a detailed statement of those items in the record.

(The statement referred to is as follows:)

Rental of buildings, District of Columbia, fiscal year 1919.

Deficiency act June 15, 1917.....	
Deficient act Oct. 6, 1917.....	\$37,875.00

Estimate "Rent of buildings, District of Columbia," fiscal year 1919.

Item No.	Purposes.	Appropriation, fiscal year 1918.	Estimate for fiscal year 1919—present strength.		
			Current requirements.	New construction.	Total.
312	Rental of buildings, District of Columbia.....	\$42,225.10	\$100,015.10	.....	\$100,015.10
33	Rental of quarters for officers.....	.....	.....	.....	.....
33a	Rental of quarters for nurses.....	.....	.....	.....	.....
34	Rental of quarters for noncommissioned officers.....	.....	.....	.....	.....
35	Rental of quarters for privates.....	.....	.....	.....	.....
Total.....		42,225.10	100,015.10	.....	100,015.10

Comparison between appropriations for fiscal years 1917, 1918, and estimate for 1919, appropriation "Rental of buildings, District of Columbia."

	Appropriated fiscal year—		Estimate for 1919.
	1917	1918	
Field medical supply depot.....	\$7,967.10	\$7,967.10	\$7,967.10
Signal Corps test rooms.....	2,100.00	2,100.00	.....
Quartermaster stables.....	2,700.00	2,700.00	2,700.00
Quartermaster stables and storehouses.....	4,938.00	4,938.00	.....
Do.....	3,600.00	3,600.00	3,600.00
Army Medical School.....	8,680.00	7,920.00	7,920.00
Do.....	.....	.....	2,400.00
Office of attending surgeon.....	3,000.00	3,000.00	3,000.00
Depot quartermaster's office.....	2,500.00	2,500.00	2,500.00
Do.....	.....	.....	7,200.00
Garage, Quartermaster Corps.....	1,500.00	1,500.00	1,500.00
Storeroom, Quartermaster Corps.....	54.00	.....	.....
Office Aviation Section, Signal Corps.....	5,000.00	5,000.00	3,320.00
Do.....	.....	.....	1,320.00
Recruiting offices, miscellaneous.....	.....	1,000.00	1,000.00
Warehouse.....	.....	.....	4,938.00
Corral.....	.....	.....	510.00
Laboratory, Signal Corps.....	.....	.....	2,100.00
Army medical supply depot (new building).....	.....	.....	48,000.00
Total.....	42,039.10	42,225.10	100,015.10
Appropriation, fiscal year 1918.....	.....	.....	42,225.10
Increase, estimate 1919 over appropriation 1918.....	.....	.....	57,790.00

[Appropriation "Rent of buildings, District of Columbia."]

Statement of square feet available for use of Government, cost thereof per month, assessed valuation of buildings and land, monthly rental rate, etc., and percentage total rental paid on assessed valuation, in connection with the present rentals by the War Department, in Washington, D. C., as itemized in the estimate for fiscal year 1919 under appropriation "Rental of buildings, District of Columbia."

Garage, stable, and storehouse, 236-238 Nineteenth Street NW. (entire building occupied by the Government):	
Available space for Government use.....	square feet.. 27, 370
Rate paid per square foot per month (garage, \$0.024; stable and storehouse, \$0.014).....	\$0. 038
Assessed valuation of building and land.....	\$24, 795
Monthly rental (garage, \$125; stable and storehouse, \$300).....	\$425
Total rental per annum (garage, \$1,500; stable and storehouse, \$3,600)..<	\$5, 100
Aviation Section, Signal Corps, Mills Building (two floors occupied by the Government):	
Available space for Government use.....	square feet.. 4, 511
Rate paid per square foot per month.....	\$0. 062
Assessed valuation of building and land.....	\$245, 666
Monthly rental.....	\$280
Total rental per annum.....	\$3, 360
Stable, Nineteenth Street and Virginia Avenue NW. (entire building occupied by the Government):	
Available space for Government use.....	square feet.. 20, 790
Rate paid per square foot per month.....	\$0. 0107
Assessed valuation of building and land.....	\$19, 506
Monthly rental.....	\$225
Total rental per annum.....	\$2, 700
Corral, southwest corner Nineteenth Street and Virginia Avenue NW. (entire building occupied by the Government):	
Available space for Government use.....	square feet.. 24, 357
Rate paid per square foot per month.....	\$0. 0017
Assessed valuation of building and land.....	\$9, 743
Monthly rental.....	\$42. 59
Total rental per annum.....	\$510
Office, depot quartermaster, 32 Seventeenth Street NW. (entire building occupied by the Government):	
Available space for Government use.....	square feet.. 7, 024
Rate paid per square foot per month.....	\$0. 0279
Assessed valuation of building and land.....	\$19. 048
Monthly rental.....	\$208. 33
Total rental per annum.....	\$2, 499. 96
Warehouse, 1514 Eckington Place NE. (entire building occupied by the Government):	
Available space for Government use.....	square feet.. 37, 184
Rate paid per square foot per month.....	\$0. 0087
Assessed valuation of building and land.....	\$50, 449
Monthly rental.....	\$411. 50
Total rental per annum.....	\$4, 938
Office dispensary, northwest corner Connecticut Avenue and L Street (two floors occupied by the Government):	
Available space for Government use.....	square feet.. 4, 448
Rate paid per square foot per month.....	\$0. 0561
Assessed valuation of building and land.....	\$85, 391
Monthly rental.....	\$250
Total rental per annum.....	\$3, 000
Laboratory, Signal Corps, 1710 Pennsylvania Avenue NW. (entire building occupied by the Government):	
Available space for Government use.....	square feet.. 4, 881
Rate paid per square foot per month.....	\$0. 0358
Assessed valuation of building and land.....	\$72, 114
Monthly rental.....	\$175
Total rental per annum.....	\$2, 100

Aviation Section, Signal Corps, Munsey Building (4 rooms occupied by the Government):

Available space for Government use.....square feet..	1,050
Rate paid per square foot per month.....	\$0.1047
Assessed valuation of building and land.....	\$1,138,742
Monthly rental.....	\$110
Total rental per annum.....	\$1,320

Army Medical School, 464 Louisiana Avenue NW. (6 floors and subbase-ment occupied by the Government):

Available space for Government use.....square feet..	39,066
Rate paid per square foot per month.....	\$0.0279
Assessed valuation of building and land.....	\$96,614
Monthly rental, including heat and light.....	\$1,000
Total rental per annum, including heat and light.....	\$12,000

Field Medical Supply Corps, 21 M Street NW. (first floor and basement occupied by the Government):

Available space for Government use.....square feet..	66,826
Rate paid per square foot per month.....	\$0.0105
Assessed valuation of building and land.....	\$107,649
Monthly rental.....	\$663,925
Total rental per annum.....	\$7,967.10

Field Medical Supply, First and M Streets, NE. (entire building occupied by the Government):

Available space for Government use.....square feet..	192,000
Rate per square foot per month.....	\$0.209
Assessed valuation of building and land.....	\$361,249
Monthly rental.....	\$4,000
Total rental per annum.....	\$48,000

Office, depot quartermaster, 1729 New York Avenue NW. (entire building occupied by the Government):

Available space for Government use.....square feet..	15,696
Rate paid per square foot per month.....	\$0.0261
Assessed valuation of building and land.....	\$63,018
Monthly rental.....	\$600
Total rental per annum.....	\$7,200

It is not believed that the assessed valuations represent the true value of the different properties. For instance, the building wherein the office of the depot quartermaster is located, 532 Seventeenth Street NW., is assessed at \$19,048. It is thought that the building could not be purchased for twice that amount.

Item 362.—Rental of buildings, District of Columbia.

[Estimate fiscal year 1919, \$100,015.10.]

	United States.			Philippine Islands.			Grand total.
	Current require-ments.	New construc-tion.	Total.	Current require-ments.	New construc-tion.	Total.	
Estimate.....	\$100,015.10	.....	\$100,015.10	.....	.....	.....	\$100,015.10
Appropriated fiscal year 1918.....	42,225.10	.....	42,225.10	.....	.....	.....	42,225.10
Expended fiscal year 1917.....	42,039.10	.....	42,039.10	.....	.....	.....	42,039.10

REMARKS.

There have been no expenditures under items 363, 363a, 364, 365 (rental of quarters) during the fiscal year 1917 under this appropriation, nor were any amounts estimated for these purposes during the fiscal year 1918. No amount is, therefore, recommended under the above-mentioned item numbers.

The services to be procured under this item are the rental of offices, storehouses, garages, stables, recruiting stations, etc., in the District of Columbia.

Below is a list showing the buildings or portions of buildings rented in the District of Columbia during the fiscal year 1917 under this item.

Location and use:	Rate per annum
First and M Streets NE., field medical supply depot.....	\$7, 967. 10
Connecticut Avenue and L Street, office attending surgeon.....	3, 000. 00
Dupont Storage Co., garage.....	1, 500. 00
Dupont Storage Co., stable and warehouse.....	3, 600. 00
1514 Eckington Place, storehouse and stable.....	4, 938. 00
Virginia Avenue NW., stable and warehouse.....	2, 700. 00
1710-1712 Pennsylvania Avenue NW., Signal Corps laboratory.....	2, 100. 00
532 Seventeenth Street NW., office depot quartermaster.....	2, 500. 00
460 Louisiana Avenue NW., Army Medical School.....	8, 680. 00
1140 Fifteenth Street NW., storage campaign badges.....	54. 00
Mills Building, Seventeenth Street, office Aviation Corps.....	5, 000. 00
Total.....	42, 039. 10

Proposed rentals fiscal year 1918.

Location and use:	
First and M Streets NE., field medical supply depot.....	\$7, 967. 10
Connecticut Avenue and L Streets, office attending surgeon.....	3, 000. 00
Dupont Storage Co., garage.....	1, 500. 00
Dupont Storage Co., stable and warehouse.....	3, 600. 00
1514 Eckington Place, storehouse and stable.....	4, 938. 00
Virginia Avenue NW., stable and warehouse.....	2, 700. 00
1710-1712 Pennsylvania Avenue NW., Signal Corps laboratory.....	2 100. 00
532 Seventeenth Street NW., office depot quartermaster.....	2, 500. 00
480 Louisiana Avenue NW., Army Medical School.....	7, 920. 00
Mills Building, Seventeenth Street, office Aviation Corps.....	5, 000. 00
Recruiting stations, miscellaneous.....	1, 000. 00
Total.....	42, 225. 10

Proposed rentals fiscal year 1919.

Location and use:	
238 Nineteenth Street NW., garage.....	\$1, 500. 00
236 Nineteenth Street NW., stable and storehouse.....	3, 600. 00
Mills Building Aviation Section, Signal Corps.....	3, 360. 00
Nineteenth Street and Virginia Avenue NW., stable.....	2, 700. 00
Southwest corner Nineteenth Street and Virginia Avenue NW., corral	510. 00
532 Seventeenth Street NW., office depot quartermaster.....	2, 500. 00
1729 New York Avenue NW., office depot quartermaster.....	7, 200. 00
1514 Eckington Place NE., warehouse.....	4, 938. 00
Northwest corner Connecticut Avenue and L Street, office and dispensary.....	3, 000. 00
1710 Pennsylvania Avenue NW., laboratory, Signal Corps.....	2, 100. 00
Munsey Building, Aviation Section, Signal Corps.....	1, 320. 00
464 Louisiana Avenue NW., Army Medical School.....	7, 920. 00
Do.....	2, 400. 00
21 M Street NW., Field Medical Supply Corps.....	7, 967. 10
Recruiting offices, miscellaneous.....	1, 000. 00
Army medical supply depot (now being erected).....	48, 000. 00
Total.....	100, 015. 10

Increase of fiscal year 1919 over fiscal year 1918, \$57,790.

Item 353.—Rental of buildings, District of Columbia: Rental of quarters for officers: No estimate is submitted for rental of quarters for officers, as all officers on duty in Washington are on a commutation status.

Item 363a.—Rental of buildings, District of Columbia: Rental of quarters for nurses: No estimate is submitted for rental of quarters for nurses, as all nurses on duty in Washington are on a commutation status.

Item 354.—Rental of buildings, District of Columbia: Rental of quarters for non-commissioned officers: No estimate is submitted for rental of quarters for noncommissioned officers, as well as noncommissioned officers on duty in Washington are on a commutation status.

Item 355.—Rental of buildings, District of Columbia: Rental of quarters for privates: No estimate is submitted for rental of quarters for privates, as all privates on duty in Washington are on a commutation status.

Maj. OURY. Referring again to the estimate for shooting galleries and ranges, I am under the impression that we have omitted from this amount the money necessary to continue the leases during the next fiscal year. Of course, the majority of the Regular Army ranges are owned outright by the Government, but in the cases of many of the National Army camps those ranges have been leased from the people in the locality of the camp. Some of them are several miles from the regular camp. While we have provided for the necessary needs to pay for those until the end of the fiscal year, it seems to me we have omitted that sum.

The CHAIRMAN. That would come in in a supplemental estimate?

Maj. OURY. Yes.

CLAIMS FOR DAMAGES.

The CHAIRMAN. The next item is, "Claims of damages to and loss of private property, \$10,000." The amount appropriated under this item at the last session of Congress was \$20,000.

Col. DALY. We have had appropriated \$20,000.

The CHAIRMAN. You are asking for \$10,000 this year?

Col. DALY. The normal requirements under the appropriation have been \$5,000, but because of the large increase of the Army and the movement of troops, we have had more damages to pay.

The CHAIRMAN. I suppose you can tell pretty well, up to date, how much of the \$20,000 that was appropriated last year has been used.

Col. DALY. We have about \$2,600 of that amount unexpended, but we have claims in, not adjudicated, that will reduce it.

Mr. QUINN. What do those claims consist of?

Mr. DALY. They consist of damages to crops and fences, and damages due to heavy gun fire, the breaking of windows, due to heavy gun fire. The claims are only allowed, when the damage is due to the movement of troops. If the damage is done by an individual, that is a tort, and it does not come out of this amount.

The CHAIRMAN. What about damages for horses?

Col. DALY. We have no authority to pay any such damages under this appropriation.

Gen. SHARPE. Where a man claims he was injured by a truck operated by one of our motor drivers——

The CHAIRMAN. You do not pay any claims like that?

Gen. SHARPE. No, sir.

The CHAIRMAN. This list we have here is a list of the claims filed which were denied?

Gen. SHARPE. Yes, sir.

Mr. KAHN. As I understand it, the Auditor for the War Department has to approve the claim?

Col. DALY. He pays it. The claim is presented to the War Department and examined by the Quartermaster General's Office, and then it goes to the Secretary of War for approval, and he sends it to the Auditor for the War Department for payment.

CLAIMS FOR DAMAGES TO AND LOSS OF PRIVATE PROPERTY.

Deficiency act October 6, 1917, \$15,000.

"For payment of claims for damages to and loss of private property incident to the training, practice, and operations of the Army that have accrued, or may hereafter accrue, from time to time, to be immediately available and to remain available until

expended: *Provided*, That settlement of such claims shall be made by the Auditor for the War Department, upon the approval and recommendation of the Secretary of War, where the amount of damages has been ascertained by the War Department, and payment thereof will be accepted by the owners of the property in full satisfaction of such damages, \$10,000."

In this connection it may be remarked that during the year from October 1, 1916, to October 1, 1917, claims of this character aggregating \$12,726.87, which have been approved, or are ready for approval, have been received. Of this, 42 claims amounting to \$4,998.79 have been paid from the appropriation of \$5,000 in the Army act approved April 27, 1917, leaving claims on file aggregating \$7,728.08. These claims will be paid out of the appropriation of \$15,000 for damage claims in the urgent deficiency appropriation act just approved, which will leave a balance of that appropriation of \$7,271.92 for the payment of claims hereafter accruing. As during the past year, claims amounting to nearly \$13,000 have been received, and in view of the fact that on account of the mobilization of a large Army, this class of claims will doubtless be largely increased, it is considered that in addition to the balance of the appropriation in the urgent deficiency act, an additional appropriation of \$10,000 will be required to care for all such claims as may be received from this date to the end of the next fiscal year.

[Seventh Indorsement.]

WAR DEPARTMENT,
JUDGE ADVOCATE GENERAL'S OFFICE,
November 15, 1917.

To the SECRETARY OF WAR:

1. The views of this office are requested upon the question whether certain claims for damages which it is alleged resulted from a collision between a Government truck and a buggy in which the claimants were riding, should be paid. The facts as found by the surveying officer appointed to investigate the claim are substantially as follows:

On September 6, 1917, F. E. Taylor, accompanied by B. C. Broom, were traveling down Bland Street, Charlotte, N. C., in a buggy. The truck in charge of Ray H. Cummings, Motor Truck Company No. 104 of the Quartermaster Reserve Corps, approached rapidly from the rear and Mr. Taylor turned out of the street and close to the curb to allow the truck to pass. While passing at a distance of about 3 feet a tail gate chain on the truck, which had been made fast at the start of the journey but had jarred loose as a result of traveling over the rough roads characteristic of that section of the country, and not noticed by those on the truck, caught in the wheel of the buggy, turning it around, throwing the occupants out, and dragging the buggy about 50 feet before the driver of the truck realized the situation. The horse and buggy were injured considerably, and both Mr. Taylor and Mr. Broom received various bruises and scratches and were badly shocked. It is found that the accident was not due to any negligence on the part of driver Cummings.

Mr. Taylor presented a claim for \$500 for personal injuries and \$65 for damages to his horse and buggy. The claim presented by Mr. Broom is for \$100, for personal injuries. The Quartermaster General states, if the item for damage to the property be given favorable consideration, he sees no objection to administrative approval in the amount claimed, \$65.

2. The applicable provision of the Army appropriation act for the fiscal year 1918, approved May 13, 1917, is—

"For payment of claims for damages to and loss of private property incident to the training, practice, and operations of the Army that have accrued, or may hereafter accrue from time to time, to be immediately available and to remain available until expended: *Provided*, That settlement of such claims shall be made by the Auditor for the War Department, upon the approval and recommendation of the Secretary of War, where the amount of damages has been ascertained by the War Department, and payment thereof will be accepted by the owners of the property in full satisfaction of such damages, \$5,000."

3. If the damage sustained to the horse and buggy of Mr. Taylor was incident to the operations of the Army, then the Secretary of War would be justified in approving so much of his claim as relates to the damage to the horse and buggy.

The word "operations" as used in the statute is not sufficiently broad to include maintenance, and used as it is with the words "training" and "practice," and because of its military significance, it would indicate movement and activity.

4. Accordingly, the character of the claim for which payment is contemplated by the statute as falling within the meaning of the term "incident * * * to the operations of the Army," is a claim having as its basis a damage which has been occasioned by an act done in connection with some movement or activity of the Army.

The motor truck at the time of the collision was not being used in the movement of troops, but in the maintenance of the Army. Therefore, the collision, which resulted in the alleged damage, was not incident to the operations of the Army.

5. It is the opinion of this office, therefore, that the damage here claimed was not incident to the "operations" of the Army within the purview of this statute, and that the Secretary of War may not, therefore, recommend payment.

S. T. ANSELL,
Acting Judge Advocate General.

[Eighth indorsement.]

WAR DEPARTMENT,
November 17, 1917.

To the QUARTERMASTER GENERAL.

The foregoing opinion of the Acting Judge Advocate General is approved.

BENEDICT CROWELL,
Assistant Secretary of War.

VOCATIONAL TRAINING.

The CHAIRMAN. The next item is "Vocational training, \$75,000." The appropriation made under this item last year was \$250,000. What is the cause of the decrease in that estimate?

Col. DALY. The movement of troops, and the war. It is not possible to carry on that work under the present conditions. This \$75,000 asked for here is for the purchase of textbooks, tools, equipments, and machinery. The equipments and the machinery and the tools are for use of the Disciplinary Barracks at Fort Leavenworth, in taking the men sent there for confinement and giving them vocational training. The textbooks are for distribution at various camps.

Mr. FIELDS. In how many camps have you classes organized in this training?

Col. DALY. I can not answer that.

Mr. FIELDS. Where can we get that information?

Col. DALY. I think you can get that from The Adjutant General.

Mr. SHALLENBERGER. They are principally in the Disciplinary Barracks, are they not?

Col. DALY. This particular appropriation applies to the Disciplinary Barracks, but the purpose of the act and of the appropriation of \$250,000 was to take up at the various posts.

Mr. FIELDS. I think last year you had 24 classes organized at the various posts, and I was interested in knowing what work had been done.

Mr. KAHN. How much of the \$250,000 appropriated last year have you expended?

Col. DALY. \$212,985.

Mr. KAHN. For what purpose?

Col. DALY. At the Disciplinary Barracks. I will put that in the record.

Mr. ANTHONY. Because of the employment of the Army in the field, it has been impracticable to establish vocational training as originally intended by the bill?

Col. DALY. Yes, sir. They have established some at the camps; there have been noncommissioned officers' schools established, and a certain expenditure has been made for that purpose.

Mr. ANTHONY. Because of the fact that at the Disciplinary Barracks you had a large number of comparatively inactive men you are unable to put in there vocational training in agriculture?

Col. DALY. Yes, sir.

Mr. ANTHONY. I might state that I understand it is thought there will be about 5,000 in the near future in the Disciplinary Barracks, and it is intended to use them largely in the intensive development of the ground there.

Col. DALY. Yes, sir. That is the principal expenditure out of the \$250,000 made for that purpose.

Mr. KAHN. How many acres of ground have you there?

Mr. ANTHONY. There are about 300 acres in the prison farm proper now, and they are starting to clear 1,000 acres of timberland, owned by the Government, and never used before.

Mr. FIELDS. How do the men take to the vocational training at the Disciplinary Barracks?

Col. DALY. I am not familiar with that. Gen. McCain can tell you about that.

Mr. KAHN. I have visited the Disciplinary Barracks at Alcatraz Island, in San Francisco Bay, and there they are teaching the men shoemaking, and laundry work, and industries of that kind. The men take to it very kindly.

Mr. SHALLENBERGER. Was it intended under that law that a man should have to get into the Disciplinary Barracks before he got the training?

Mr. ANTHONY. No, but they had these men there, and the idea was that that would give them a start in training these men for vocations which they could follow, and enable them to live useful lives afterwards, when they either return to the Army as soldiers or go out into civil life.

Gen. SHARPE. The idea is to overcome the great objection always made to prison confinement where you would require them to carry brick from one side of a yard to the other.

Mr. SHALLENBERGER. My idea was entirely different about that, that it was not to be applied to prison life at all, but primarily to educate a soldier in some useful vocation after he came out.

Gen. SHARPE. That is true, but it was intended also to have vocational training in the prison itself.

Mr. SHALLENBERGER. My idea of it was that it was not to be expended in the prisons and that that was contrary to the intention of Congress. But I am not objecting to that at all.

Mr. KAHN. I think you have a false idea of what the Disciplinary Barrack is.

A man upon going into the Disciplinary Barrack is given a chance to rehabilitate himself and serve out the balance of his term in the Army. There are cases of desertion where the soldier gives himself up. He is tried by a court-martial and his sentence, instead of keeping him in prison altogether, allows him to still go on with his training as a soldier, giving a certain number of hours a day to his duty as a soldier, and the balance of the day he would be confined in the prison. But to take away the burden of that, they give him a chance to learn some useful trade, and probably when he gets an honorable discharge from the Army he can go out and earn his own living.

Mr. FIELDS. I think that money is well expended, but I think it should not be confined to the Disciplinary Barracks.

Mr. ANTHONY. In time of peace it would be used for vocational training in the arts and sciences.

Mr. FIELDS. It is practically impossible to carry it on now.

Mr. SHALLENBERGER. The colonel stated that noncommissioned officers' schools have been established at certain camps. Could not that money be properly used from this fund for the noncommissioned officers' schools? That is training a man in his duties as a soldier, is it not?

Gen. SHARPE. We do not understand it that way. This is for the purpose of giving him some trade or occupation.

Mr. SHALLENBERGER. In response to a question as to whether or not the training was being carried on, I understood you to say, Col. Daly, that noncommissioned officers' schools had been established, and that the expenses of those schools would not be paid out of this fund.

Col. DALY. No, sir.

(The details of the estimate are as follows:)

Vocational training.

Objects of expenditure.	Estimated. 1919.	Expended, 1917.
Textbooks.....	\$3,000.00	\$4,000.00
Tools.....	5,000.00	6,000.00
Equipment and machinery.....	67,000.00	112,885.00
Total.....	75,000.00	122,885.00

PURCHASE OF LAND, JEFFERSONVILLE.

The CHAIRMAN. The next item is "Purchase of land, addition to Jeffersonville, Ind., depot: For purchase of approximately 12 acres of land as an addition to the reservation of the Jeffersonville, Ind., depot of the Quartermaster Corps, \$23,000." That is a new item.

Gen. SHARPE. I have a very full and complete statement in regard to this property, which amounts to 12.188 acres.

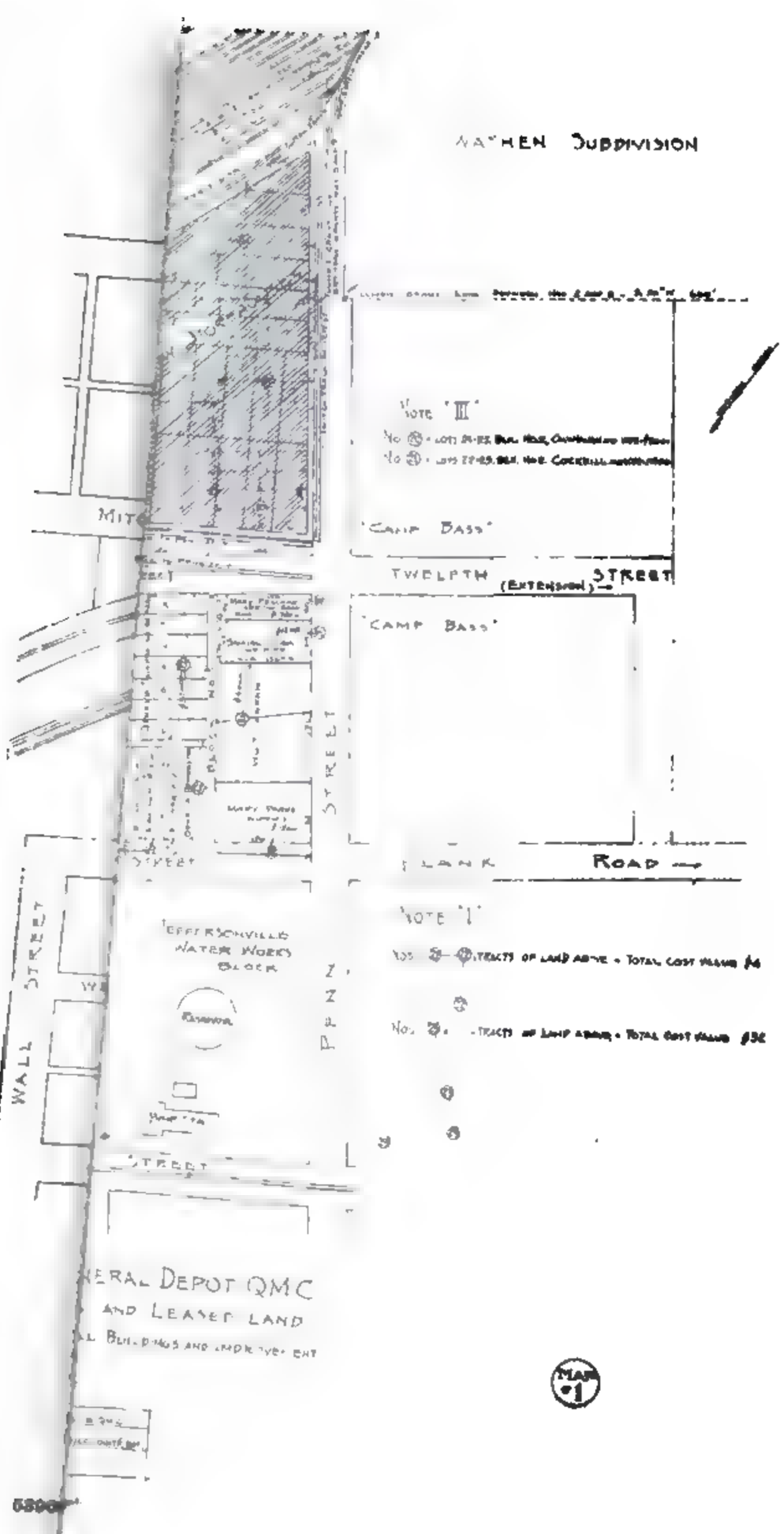
WAR DEPARTMENT,
OFFICE OF THE DEPOT QUARTERMASTER,
Jeffersonville, Ind., November 22, 1917.

From: Depot Quartermaster, Jeffersonville, Ind.
To: Quartermaster General, Washington, D. C.
Subject: Purchase of land at Jeffersonville, Ind.

Your letters of October 29 and November 14, advising that your office has included in the estimates fiscal year 1919, submitted for action of Congress an item covering approximately twelve acres of land, at an estimated cost of \$23,000 for the enlargement of the Jeffersonville depot reservation, and requesting specific information to enable your office to properly explain the item when hearings in connection therewith are had.

The property lying just to the east of the present reservation which is shown in blue print, Appendix A, is a tract of ground consisting of 12¹⁸⁸/₁₀₀₀ acres, the smaller portion of this ground being vacant while the larger portion has been divided up into city lots, and has, as indicated in the blue print, improvements of various character thereon, consisting largely of small homes, most of which have no practical value except in so far as they represent the individual holdings of the owners, and therefore the cost of this addition is necessarily enhanced as these homes can not be appropriated without proper remuneration to the owners thereof.

NATHAN SUBDIVISION



NOTE "II"
 No. 1 - LOT 21-22, Bldg. No. 1, Containing 1000 sq. ft.
 No. 2 - LOT 23-24, Bldg. No. 2, Containing 1000 sq. ft.

NOTE "I"
 100 - 1 - TRACTS OF LAND ABOVE - TOTAL COST VALUE \$4
 100 - 2 - TRACTS OF LAND ABOVE - TOTAL COST VALUE \$36



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The following is a description of the individual holdings:

1. Beginning at the intersection of Tenth and Mechanic Streets on southwest corner, and continuing thence in a westerly direction 215 feet more or less, to Fulton Street, in the city of Jeffersonville; thence about 200 feet more or less to a stake; thence in a westerly direction 215 feet more or less to the eastern line of Mechanic Street; thence in a southerly direction to point of beginning. This property is owned by John Rauschenberger, and is at present under lease for the sum of \$150 per annum, with an option to purchase for \$3,200.

2. Beginning at a point in the western line of block 122, $208\frac{1}{8}$ feet from the northwest corner thereof; thence on said line northwardly $30\frac{3}{8}$ feet; thence eastwardly and parallel with the southern line of said lot $126\frac{3}{8}$ feet; thence southwardly $32\frac{3}{8}$ feet; thence westwardly to the place of beginning. Beginning at a point $126\frac{1}{8}$ feet east of the southwest corner of northern half of block 122, thence north 30 feet; thence $58\frac{1}{8}$ feet to Fulton Street; thence south on Fulton $30\frac{1}{8}$ feet; thence westwardly $70\frac{3}{8}$ feet to the place of beginning.

This property is owned by Edgar Wayman and Laura Wayman, his wife, the improvements thereon being a two-story frame house, these owners declining to option. Appraisement made by three real estate men in the city of Jeffersonville affix value of \$200 for the ground and \$1,600 for the improvements thereon.

3. Beginning at part of block 122 of the enlargement of the city of Jeffersonville, being the northern half of block 122, excepting, however, the strip of ground which begins at the southwest corner of said northern half and runs thence with the western line of said block northwardly $30\frac{3}{8}$ feet to a stake, thence eastwardly and parallel with the southern line of said block $126\frac{3}{8}$ feet to a stake, thence at right angles southwardly $32\frac{3}{8}$ feet to a stake, thence westwardly and parallel with the southern line of said block to the place of beginning.

This property is owned by the Emi'y Honer's estate, and it being impossible to secure an option thereon an appraisement has been made by three real estate men in the city of Jeffersonville, who affixed price of the ground at \$1,500 and the improvements thereon, a two-story frame house, at \$1,200, making a total of \$2,700.

4. Beginning at the southwest corner of block 123, thence eastwardly with the northern line of Eleventh Street 50 feet to a stake, thence northwardly on a line parallel with the western line of said block to the place of beginning.

On this lot is located a frame two-story house, the front part of which is used as a grocery store, the rear and upper part being used as a residence, together with stables and necessary outbuildings, which the owner in September optioned for the sum of \$3,200, but this option has now expired, and the owner refuses absolutely to extend or make a new figure thereon. Owner Samuel W. Isler, and Linnie Isler, his wife.

5. The same owner holds real estate in survey No. 2, of the Illinois grant, Clark County, State of Indiana, being 20 feet off the south side of lot 14, all of lot 15, and 15 feet off the north side of lot 16 in block 1, of Eliza A. Reed and William T. Ingram's subdivision of part of letter "A," survey No. 2, of the Illinois grant.

There is situated hereon a one-story frame building which this owner in September optioned at \$1,200, and at the present time Samuel Isler has granted an extension on this option for a period of four months, but his wife, Linnie Isler, refuses absolutely to option at this figure, which, as a matter of course, makes the option of no value.

In the estimation of real estate men in the city of Jeffersonville the original option on both pieces of property herein described is rather high.

6. Beginning at a point on the northern line of Eleventh Street 50 feet eastwardly from the southwest corner of block 123, thence eastwardly with the northern line of Eleventh Street 25 feet to a stake, thence northwardly on a line parallel with the western line of said block 123 to a stake in the southern line of a 10-foot alley, thence westwardly with the southern line of said alley 25 feet to a stake, thence southwardly on a line parallel with the western line of said block 123 to the place of beginning.

There is situated thereon a one-story frame cottage which this owner, Dora Ryle and Charles O. Ryle, her husband, have executed an option to sell for \$1,000.

7. Beginning at a point on the northern line of Eleventh Street 125 feet eastwardly from the southwest corner of block 123, thence eastwardly with the northern line of Eleventh Street to the southeast corner of said block 123, thence northwardly with the western line of Fulton Street 120 feet to a 10-foot alley, thence westwardly with the southern line of said alley to a point 125 feet eastwardly on the western line of said block 123, thence southwardly on a line parallel with the western line of said block 123 to the place of beginning.

There is located thereon a two room frame cottage, with kitchen attachment, which owner, Eva Miss, widow, has optioned for the sum of \$700.

8. Beginning at a point on the eastern line of Mechanic Street 55 feet southwardly from the northwest corner of block 123; thence southwardly with the eastern line of

Mechanic Street 22 feet to a stake; thence eastwardly on a line parallel with the northern line of said block to a stake in the western line of Fulton Street; thence northwardly with the western line of Fulton Street 22 feet to a stake; thence westwardly on a line parallel with the northern line of said block to the place of beginning.

9. Also real estate in said block 123, beginning at a point on the eastern line of Mechanic Street, 160 feet southwardly from the northwest corner of said block 123; thence southwardly with the east line of Mechanic Street, $98\frac{7}{8}$ feet to a stake; thence eastwardly on a line parallel with the northern line of said block 123 to a stake on the western line of Fulton Street; thence northwardly with the western line of Fulton Street $98\frac{7}{8}$ feet to a stake; thence westwardly on a line parallel with the northern line of said block 123 to the place of beginning.

Oscar G. Miller, and Clara L. Miller, his wife, have executed an option covering descriptions 8 and 9 for the sum of \$1,500, covering real estate and improvements thereon, which consist of three one story frame cottages.

10. Beginning at a point on the east line of Mechanic Street 130 feet southwardly from the northwest corner of block 123; thence southwardly with the east line of Mechanic Street 25 feet to a stake; thence eastwardly on a line parallel with the northern line of said block 123 to a stake in the western line of Fulton Street; thence northwardly with the western line of Fulton Street 25 feet to a stake; thence westwardly on a line parallel with the northern line of said block 123 to the place of beginning.

Alexander Lee and Minnie Lee, his wife, have executed an option on the above real estate, including a one story frame cottage, for the sum of \$200.

11. Beginning at a point on the east side of Mechanic Street 105 feet southwardly from the northwest corner of block 123; thence southwardly with the east line of Mechanic Street 25 feet to a stake; thence eastwardly on a line parallel with the northern line of said block 123 to a stake in the western line of Fulton Street; thence northwardly with the western line of Fulton Street 25 feet to a stake; thence westwardly on a line parallel with the northern line of said block 123 to the place of beginning.

The owner, Belle Strong, widow, has optioned this real estate, including a one-story frame cottage thereon, for the sum of \$500.

12. Beginning at a point on the east line of Mechanic Street 75 feet southwardly from the northwest corner of block 123; thence southwardly with the east line of Mechanic Street 30 feet to a stake; thence eastwardly on a line parallel with block 123; thence southwardly with the east line of Mechanic street 30 feet to a stake; thence eastwardly on a line parallel with the north line of said block to the west line of Fulton Street; thence northwardly with the west line of Fulton Street 30 feet to a stake; thence westwardly on a line parallel with the northern line of said block 123 to place of beginning.

Edgar I. Coombs and Catherine Coombs, his wife, have optioned this real estate with the improvement thereon, a one-story frame cottage, for the sum of \$800.

13. Beginning at the northwest corner of block 123 thence southwardly with the east line of Mechanic Street 30 feet to a stake, thence eastwardly on a line parallel with the northern line of said block to a stake in the western line of Fulton Street, thence northwardly with the western line of Fulton Street 30 feet to the northern line of said block, thence westwardly with the northern line of said block to the place of beginning. Also that part of said block 123 beginning at a point on the eastern line of Mechanic Street 52 feet southwardly from the northwest corner of said block, thence southwardly with the eastern line of Mechanic Street three feet to a stake, thence eastwardly on a line parallel with the northern line of said block 123 to a stake in the western line of Fulton Street, thence northwardly with the western line of Fulton Street 3 feet to a stake, thence westwardly on a line parallel with the northern line of said block to the place of beginning.

The owner, Lucy Dry, widow, has executed an option on this real estate and a one-story frame cottage thereon for the sum of \$600.

14. Beginning at a point on the east line of Mechanic Street, 30 feet southwardly from the northwest corner of block 123, thence southwardly with the east line of Mechanic Street 22 feet to a stake, thence eastwardly on a line parallel with the northern line of said block to a point in the western line of Fulton Street, thence northwardly with the western line of Fulton Street 22 feet to a stake, thence westwardly on a line parallel with the northern line of said block to the place of beginning.

Eugene Townsend and Ida Townsend, his wife, have optioned this real estate, without improvements, for the sum of \$125.

15. Lot No. 1, and 5 feet off the west side of lot No. 2 in block No. 1 of Eliza A. Reed, and William T. Ingram's subdivision of part of letter A, survey No. 2, Illinois grant,

plat of which subdivision is recorded on page 28 of plat book 4 in the office of the recorder of Clark County, State of Indiana.

Lewis Daniel Hutt, widower, the owner, has executed an option on this real estate, together with the improvement thereon, a one-story frame cottage of five rooms, for \$1,500.

16. Twenty-five feet off the east side of lot 2, and 15 feet off the west side of lot 3, in block No. 1, of Eliza R. Reed and William T. Ingram's subdivision of part of letter A, survey No. 2, of Illinois grant, plat of which subdivision is recorded on page 28, of plat book 4, in the office of the recorder of Clark County, State of Indiana.

The owners, Elizabeth Nichols and Reasom M. Nichols, her husband, have executed an option covering this real estate with the improvement thereon, consisting of a one-story frame house, for \$1,300.

17. Fifteen feet off the east side of lot 3 and 15 feet off the west side of lot 4, in block 1, of Eliza A. Reed and William T. Ingram's subdivision, part of letter A, survey No. 2, of the Illinois grant, plat of which subdivision is recorded on page 28 of plat book 4, in the office of the recorder of Clark County, State of Indiana.

Reasom M. Nichols and Elizabeth Nichols, his wife, owners of this real estate, have executed an option covering said real estate together with the improvement thereon, a one-story frame cottage, for the sum of \$700.

18. Lots 23, 24, and 25, and 5 feet off the south side of lot 22, in block 1, of Eliza A. Reed and William T. Ingram's subdivision, part of letter A, survey No. 2, of the Illinois grant, plat of which subdivision is recorded on page 28 of plat book 4, in the office of the recorder of Clark County, State of Indiana.

The owner, Mary J. Parks, widow, has executed an option covering this real estate, together with the improvement thereon, a two story frame house, for the sum of \$1,500.

19. Lot 13 and 6½ feet off the north side of lot 14, in block 1, of Eliza A. Reed and William T. Ingram's subdivision, part of letter A, survey No. 2, of the Illinois grant, plat of which subdivision is recorded on page 28 of plat book 4, in the office of the recorder of Clark County, State of Indiana.

Mary Reschar and John L. Reschar, her husband, have executed an option covering this real estate, together with the improvement thereon, a one-story frame cottage, for the sum of \$750.

20. Lots 24 and 25, in block 2, of Eliza A. Reed and William T. Ingram's subdivision, part of letter A, survey No. 2, of the Illinois grant, plat of which subdivision is recorded on page 28 of plat book 4, in the office of the recorder of Clark County, State of Indiana.

Frank T. Cavanaugh and Cecelia Cavanaugh, his wife, owners, have executed an option covering this real estate and improvement thereon, consisting of a one-story frame cottage, for the sum of \$800.

21. Lots 22 and 23, in block 2, of Eliza A. Reed and William T. Ingram's subdivision, part of letter A, in survey No. 2, of the Illinois grant, a plat of which subdivision is recorded on page 28 of plat book 4, in the office of the recorder of Clark County, State of Indiana.

Jas. H. Cockrill and Carrie Cockrill, his wife, have executed an option covering this real estate, together with improvement thereon, consisting of a one-story frame cottage, for the sum of \$1,500.

22. All of the east half of block No. 2 of Eliza A. Reed and William T. Ingram's subdivision of part of letter A, survey No. 2, of the Illinois grant, plat of which subdivision is recorded at page 28 of plat book 4, in the office of the recorder of Clark County, State of Indiana, except lots 22, 23, 24, and 25; also all of block 138 in the city of Jeffersonville, Clark County, Ind.

William T. Ingram and Anna L. Ingram, his wife, have optioned this property, without any improvements thereon, for the sum of \$3,750.

23. Part of said block 123, fronting about 65 feet on Eleventh Street, from a point 125 feet east of Mechanic Street, eastwardly and extending back northwardly to an alley, also all of the west half of said block 1 in said subdivision except 15 feet off the east side of lot 3 and 15 feet off the west side of lot 4, sold to Reasom M. Nichols, and 25 feet off the east side of lot 2 and 15 feet off the west side of lot 3, sold to Elizabeth Nichols, and lot 1 and 5 feet off the west side of lot 2, sold to Lewis Daniel Hutt, also all of the west side of block 2 in said subdivision.

Ophelia Poindexter, Flora C. Stannard, and others, grantees of Eliza A. Reed, by Jas. E. Poindexter, attorney in fact, have executed an option to sell all of the above-described real estate, without improvements thereon, for the sum of \$3,200.

24. Approximately two acres in part of letter A, survey No. 2, of the Illinois grant, Eliza A. Reed and William T. Ingram's subdivision, now owned by the Louisville & Jeffersonville Bridge & Railroad Co., is under lease, but not possible to secure an option. In order to acquire title, condemnation proceedings will have to be instituted.

This covers entirely the property lying to the east of the reservation. The streets and alleys passing through have all been temporarily vacated for Government purposes, by the city council, and the county commissioners, and all streets and alleys will be permanently vacated, thus adding materially to the acreage of the east.

Adding an estimate of \$1,000 for the property now under lease from the Louisville & Jeffersonville Bridge & Railroad Co., on which no option has been secured, the total amount estimated as necessary for the purchase of real estate and improvements lying on that portion east of the depot is \$33,775 for the 12 188/1000 acres, and authority to purchase on this side is urgently recommended as an immediate necessity.

25. Beginning at the southeast corner of block 119, in the city of Jeffersonville; thence northwardly with the west line of Watt Street, 40 feet to a stake; thence westwardly on a line parallel with the south line of said block to a stake in the east line of a 10-foot alley; thence southwardly with the east line of said alley to a stake in the south line of said block to the place of beginning.

Minnie Reeder, widow, owner, has executed an option for the above property in sum of \$1,500, covering real estate and a 2-story frame house thereon.

26. Beginning at a stake in the west line of Watt Street, 40 feet northwardly from the southeast corner of said block 119; thence northwardly with the west line of Watt Street 60 feet to a stake; thence westwardly on a line parallel with the south line of said block 119 to a stake in the east line of a 10-foot alley; thence eastwardly on a line parallel with the south line of said block to the place of beginning.

Martin A. Conroy, widower, has executed an option on this property, together with the improvement thereon, a one-story frame house, for the sum of \$1,000.

27. Beginning at a stake in the west line of Watt Street, 100 feet northwardly from the southeast corner of said block 119; thence northwardly with the west line of Watt Street, 60 feet to a stake; thence westwardly on a line parallel with the south line of said block 119 to a stake in the east line of a 10-foot alley; thence southwardly with the east line of said alley, 60 feet to a stake, thence eastwardly on a line parallel with the south line of said block 119 to the place of beginning.

Maggie Saffel, widow, has executed an option on this real estate, including a two-room frame cottage thereon, for the sum of \$720.

28. Beginning at a stake in the west line of Watt Street, 160 feet northwardly from the southeast corner of said block 119; thence northwardly from the west line of Watt Street, 58 feet 4 inches to a stake; thence westwardly on a line parallel with the south line of said block 119 to a stake in the east line of a 10-foot alley; thence southwardly with the east line of said alley, 58 feet 4 inches to a stake; thence eastwardly on a line parallel with the south line of said block 119 to the place of beginning.

The owners, Nellie Fisher and John Fisher, her husband, have executed an option on this and property described in paragraph 36 below, for the sum of \$850, both lots having small frame cottages thereon.

29. Beginning at a stake in the west line of Watt Street, 218 feet 4 inches northwardly from the southeast corner of said block 119; thence northwardly with the west line of Watt Street, 25½ feet to a stake; thence westwardly on a line parallel with the south line of said block 119 to a stake in the east line of a 10-foot alley; thence southwardly with the east line of said alley, 25½ feet to a stake; thence eastwardly on a line parallel with the south line of said block, 119 feet to the place of beginning.

This property is owned by Annie Mitchell, colored, who refuses to execute an option, although she did on September 18 make an option for a period of 60 days for the sum of \$500, but this option has expired.

30. Beginning at a stake in the west line of Watt Street, 243 feet 10 inches northwardly from the southeast corner of said block 119; thence northwardly with the west line of Watt Street, 32 feet 10 inches to a stake; thence westwardly on a line parallel with the south line of said block 119 to a stake in the east line of a 10-foot alley; thence southwardly with the east line of said alley, 32 feet 10 inches to a stake; thence eastwardly on a line parallel with the south line of said block to the place of beginning.

Bracie Dry and Chris Dry, her husband, on the 19th day of September, executed an option on this real estate and one-story frame cottage thereon for the sum of \$500, but this option having expired, they now refuse to extend.

31. Beginning at a stake in the west line of Watt Street 276 feet and 8 inches northwardly from the southeast corner of said block 119; thence northwardly with the west line of Watt Street 58 feet 4 inches to a stake; thence westwardly in a line parallel with the south line of said block 119 to a stake in the east line of a 10-foot alley; thence southwardly with the east line of said alley 58 feet and 4 inches to a stake; thence eastwardly on a line parallel with the south line of said block to the place of beginning.

John W. Belden, unmarried, has executed an option covering this real estate and one-story frame cottage thereon for the sum of \$650.

32. Beginning at a point on the west line of Watt Street 45 feet from the northwest corner of said block 119 and extending thence southwardly with the west line of Watt Street 35 feet; thence westwardly on a line parallel with the north line of said block to a stake in the east line of a 10-foot alley; thence northwardly with the east line of said alley 35 feet to a stake; thence eastwardly on a line parallel with the north line of said block to the place of beginning.

Also all right, title and interest in a strip of ground 5 feet in width, extending from said alley to said Watt Street along the northerly side of the parcel hereinbefore described.

Martha Hardin, widow, refuses to execute an option on this piece of property, and appraisement thereon indicates the total value to be \$350.

33. Beginning at a stake in the west line of Watt Street 25 feet southwardly from the northeast corner of said block 119; thence southwardly with the west line of Watt Street 20 feet to a stake; thence westwardly on a line parallel with said block 119 in the east line of a 10-foot alley; thence northwardly on the east line of said alley 20 feet to a stake; thence eastwardly on a line parallel with the north line of said block to the place of beginning.

Melvina Broker, widow, has executed an option on this real estate with one-story frame cottage thereon for the sum of \$475, but option expired on the 27th day of November and will not be renewed.

34. Beginning at the northeast corner of block 119; thence southwardly with the west line of Watt Street 25 feet to a stake; thence westwardly on a line parallel with the north line of said block to a stake in the east line of a 10-foot alley; thence northwardly on the east line of said alley 25 feet to a stake in the north line of said block 119; thence eastwardly with the north line of said block to the place of beginning.

Being the life estate divided to Sallie Heady by the will of Elizabeth Brooker, deceased, probated in the Clark Circuit Court, Clark County, in the State of Indiana, recorded at page 223 of will record K. This being a life estate the property can not be sold, and in order to acquire it must be through condemnation proceedings. The value is estimated to be approximately \$500.

35. Beginning at the southwest corner of block 119; thence northwardly with the east line of Walnut Street $78\frac{1}{2}$ feet to a stake; thence eastwardly on a line parallel with the south line of said block 119 to a stake in the west line of a 10-foot alley; thence southwardly with the west line of said alley $78\frac{1}{2}$ feet to a stake in the south line of said block 119; thence westwardly with the south line of said block 119 to the place of beginning.

William T. Ingram and Anna L. Ingram, his wife, have executed an option on this property for the sum of \$780.

36. Beginning at a stake in the east line of Walnut Street $78\frac{1}{2}$ feet from the southwest corner of said block 119; thence northwardly with the east line of Walnut Street 25 feet to a stake; thence eastwardly on a line parallel with the south line of said block 119 to a stake in the west line of a 10-foot alley; thence southwardly on the west line of said alley 25 feet to a stake; thence westwardly on a line parallel with the south line of said block 119 to the place of beginning.

Minnie Fisher and John Fisher, her husband, owners, have executed an option on this property, together with that described in paragraph 28, including improvements for the sum of \$250.

37. Beginning at a stake in the east line of Walnut Street $103\frac{1}{2}$ feet northwardly from the southwest corner of said block 119; thence northwardly with the east line of Walnut Street $103\frac{1}{2}$ feet to a stake; thence eastwardly on a line parallel with the south line of said block to a stake in the west line of a 10-foot alley; thence southwardly with the west line of said alley $103\frac{1}{2}$ feet to a stake; thence westwardly on a line parallel with the south line of said block 119 to the place of beginning.

Alfred C. Pfau and Bessie Pfau, his wife, decline to execute an option on this property which is of comparatively small value, presumably \$500.

38. Beginning at a stake on the east line of Walnut Street 206 feet $\frac{1}{2}$ from the southwest corner of said block 119; thence northwardly with the east line of Walnut Street $103\frac{1}{2}$ feet to a stake; thence eastwardly on a line parallel with the south line of said block 119 to a stake in the west line of a 10-foot alley; thence southwardly with the west line of said alley $103\frac{1}{2}$ feet to a stake; thence westwardly on a line parallel with the south line of said block 119 to the place of beginning.

Lewis Cohen and Annie Cohen, his wife, owners, have executed an option on this property, including three one-story frame cottages, for the sum of \$3,000.

39. Beginning at the northwest corner of said block 119; thence southwardly along the east line of Walnut Street $103\frac{1}{2}$ feet to a stake; thence eastwardly on a line parallel with the north line of said block to a stake in the west line of a 10-foot alley; thence

northwardly with the west line of said alley 103 $\frac{1}{8}$ feet to the north line of said block; thence westwardly with the north line of said block to the place of beginning.

Alfred C. Pfau and Bessie Pfau, his wife, owners, decline to execute an option on this and also property indicated in paragraph 37. An approximate estimate of the value of real estate and improvements is \$500.

40. Beginning at a point on the easterly line of block 118 where the same is intersected by the southeasterly line of the right of way of the Pittsburgh, Cincinnati, Chicago & St. Louis Railway, which point is 281 feet northwardly from the southeast corner of said block; thence southwardly with the easterly line of said block to the northeasterly line of Tenth Street; thence westwardly with the southerly line of said block 110 feet more or less to the southeasterly line of said right of way; thence northwardly with the southeasterly line of said right of way to the place of beginning.

William T. Ingram and Anna L. Ingram, his wife, have executed an option on this real estate, including a one-story frame cottage thereon, for the sum of \$1,220.

41. Plot shown as circle 41 in Appendix A, owned by Jonas G. Howard, unmarried, without improvements, has not been optioned, but is appraised at approximate value of \$800.

Plots of ground 42, 43, 44, 45, 46, 47, 48, and 49, all having a depth of 150 feet, and fronting 415 $\frac{1}{8}$ feet on Locust Street, in the city of Jeffersonville, have improvements of various character, all frame, occupied generally by owners whose names are shown in Appendix A, but can not be optioned. Estimated value of the entire block, \$10,000.

50. Circle 50 being block 126 in the city of Jeffersonville, owned in its entirety by the Louisville & Jeffersonville Bridge Co. The unoccupied portion, as shown by map, is appraised at \$2,000, but no option can be secured.

51. Being parts of block 125 in the city of Jeffersonville, owned by the Pittsburgh, Cincinnati, Chicago & St. Louis Railway Co., and which the company refuses to option or sell, comprising an area of perhaps three-fourths of an acre, and which would be valuable because of lying immediately along the railroad, but no appraisal has been made.

Also unoccupied portions of block 62 owned by the same company.

52. Beginning at the southeast corner of block 125; thence northwardly with the west line of Watt Street 49 feet to a stake; thence westwardly on a line parallel with the south line of said block to a stake in the east line of a 15-foot alley; thence southwardly with the east line of said alley 49 feet to a stake in the south line of said block 125; thence eastwardly with the south line of said block to the place of beginning.

This real estate, including a partially constructed brick church building with a one-story frame parsonage to the rear, is owned by the trustees of the African Methodist Episcopal Church, and can not be optioned.

Same has been appraised at \$3,500, owners insisting that \$7,000 is a small consideration.

53. Beginning at a stake in the west line of Watt Street, 49 feet north from the southeast corner of said block 125; thence northwardly with the west line of Watt Street 20 feet to a stake; thence westwardly on a line parallel with the south line of said block 125, 115 feet to a stake; thence southwardly on a line parallel with the west line of Watt Street 20 feet to a stake; thence eastwardly and on a line parallel with the south line of said block 125 to the place of beginning.

Hillis Froman, widow, executed a 60-day option on this real estate, and one-story frame house thereon on the 26th day of September, 1917, for the sum of \$500, but declines now to renew this option.

54. Beginning at a stake in the west line of Watt Street, 69 feet northwardly from the southeast corner of block 125; thence northwardly with the west line of Watt Street 20 feet to a stake; thence westwardly on a line parallel with the south line of said block 125 to a stake in the east line of a 15-foot alley; thence southwardly with the east line of said alley 20 feet to a stake; thence eastwardly on a line parallel with the south line of said block 125 to the place of beginning. The consideration for this property is stated in paragraph 59.

55. Beginning at a stake in the west line of Watt Street 89 feet northwardly from the southeast corner of said block 125; thence northwardly with the west line of Watt Street 20 feet to a stake; thence westward on a line parallel with the south line of said block 125 to a stake in the east line on a 15-foot alley; thence southwardly with the east line of said alley 20 feet to a stake; thence eastwardly on a line parallel with the south line of said block 125 to the place of beginning.

Washington Blakemore, unmarried, owner, executed an option on the 26th day of September covering this property and one-story frame cottage thereon for the sum of \$500, but this option has expired and can not now be renewed.

56. Beginning at a stake in the west line of Watt Street 109 feet northwardly from the southeast corner of block 125; thence northwardly with the west line of Watt Street 30 feet to a stake; thence westwardly on a line parallel with the south line of said block 125 to a stake in the east line of a 15-foot alley; thence southwardly with the east line of said alley 30 feet to a stake; thence eastwardly on a line parallel with the south line of said block 125 to the place of beginning.

William A. Wilhite and Amanda Wilhite, his wife, on the 2d day of October, 1917, executed an option covering this property and the one-story frame house located thereon for the sum of \$700, but this option has expired, and it has not been possible to renew same.

57. Beginning at a stake in the west line of Watt Street 139 feet northwardly from the southeast corner of said block 125; thence northwardly with the west line of Watt Street 30 feet to a stake; thence westwardly on a line parallel with the south line of said block 125 to a stake in the east line of a 15-foot alley; thence southwardly with the east line of said alley 30 feet to a stake; thence eastwardly on a line parallel with the south line of said block 125 to the place of beginning.

Margaret Hall, widow, on the 29th day of September, 1917, executed an option on this real estate and one-story frame house thereon for the sum of \$600, but this option has not been renewed for the reason that it has been impossible to locate the owner, who is temporarily absent.

58. Beginning at a stake in the west line of Watt Street 169 feet northwardly from the southeast corner of said block 125; thence northwardly with the west line of Watt Street 31 feet to a stake; thence westwardly on a line parallel with the south line of said block 125 to a stake in the east line of a 15-foot alley; thence southwardly with the east line of said alley 31 feet to a stake; thence eastwardly on a line parallel with the south line of said block 125 to the place of beginning.

George H. Holzbog and Anna M. Holzbog, his wife, have executed an option on this real estate and one-story frame cottage thereon for the sum of \$500.

59. Part of block 125 of the enlargement of the city of Jeffersonville, beginning at a stake in the west line of Watt Street an equal distance between the north and south line of said block 125; thence northwardly with the west line of Watt Street 45 feet to a stake; thence westwardly on a line parallel with the south line of said block 125 to a stake in the east line of a 15-foot alley; thence southwardly with the east line of said alley 45 feet to a stake equal distance between the north and south lines of said block; thence eastwardly on a line parallel with the south line of said block 125 to the place of beginning.

David Truehart, widower, owner of the above property and property described in item 54, and one-story frame house thereon, has executed option for the sum of \$1,400, covering all. This option has expired, and there is some reluctance to renew.

60. Beginning at a stake in the west line of Watt Street 45 feet northwardly from a stake equal distance from the north and south lines of said block; thence northwardly with the west line of Watt Street 15 feet to a stake; thence westwardly on a line parallel with the south line of said block to a stake in the east line of a 15-foot alley; thence southwardly with the east line of said alley 15 feet to a stake; thence eastwardly on a line parallel with the south line of said block to the place of beginning.

Edward Kehoe and Minnie R. Kehoe, his wife, have executed an option on the above real estate, including a one-story frame cottage thereon, for the sum of \$700.

61. Beginning at a stake in the west line of Watt Street 60 feet northwardly from a stake equal distance from the north and south line of block 125; thence northwardly with the west line of Watt Street 54.9 feet to a stake; thence westwardly on a line parallel with the south line of said block 125 to a stake in the east line of a 15-foot alley; thence southwardly with the east line of said alley 54.9 feet to a stake; thence eastwardly on a line parallel with the south line of said block 125 to the place of beginning.

Butler Truehart et al. have executed an option on this real estate, including one-story frame cottage thereon, for the sum of \$1,400.

62. Piece of real estate owned by the Pittsburgh, Cincinnati, Chicago & St. Louis Railway Co. is covered in item 51 herein.

63. Beginning at a stake in the east line of a 15-foot alley running northwardly and southwardly through said block 125, which said stake is 49 feet northwardly from the intersection of said alley and the south line of said block 125; thence northwardly with the east line of said alley 20 feet to a stake; thence eastwardly on a line parallel with the south line of said block 125, 55 feet to a stake; thence southwardly on a line parallel with the west line of Watt Street 20 feet to a stake; thence westwardly on a line parallel with the south line of said block 125 to the place of beginning.

Thomas Froman and Clara Froman, his wife, have executed an option on this real estate, together with a one-story house thereon, for the sum of \$400.

All of the property enumerated herein lying to the west of the present reservation is estimated at \$36,095, all of which values are considered excessive, and due to some

legal complications it is the opinion that said property should be taken under condemnation proceedings, which would probably reduce the cost under this figure 25 per cent.

The immediate acquiring of title to property on the east is urgently recommended, as already temporary warehouses have been or are in the course of construction thereon.

The property lying to the west is especially desirable, inasmuch as this arrangement brings within the Government reservation valuable railroad trackage in addition to that at present enjoyed and affords additions to the reservation now occupied for open storage and which will sooner or later become a real necessity.

W. S. WOOD, *Colonel, Q. M. Corps, D. Q. M.*

The CHAIRMAN. What is the reason given for the purchase of this land?

Gen. SHARPE. It is absolutely necessary to expand the grounds there in order to enable the depot to undertake its activities. It is one of the best located depots you could possibly get, for the reason that while it is adjacent to a large city, where you can get your operatives that are required at the depot, you do not have to go in to the city to load your freight trains. They are right on the main line track, and they can be loaded without any of the switching trouble you have in almost every other place, where we are doing manufacturing.

The CHAIRMAN. What are you going to do with the 12 acres? You are not going to put up more buildings, are you?

Gen. SHARPE. We have the buildings there now. It is all leased now, and there is a great deal of additional property leased with other buildings on it.

Mr. FIELDS. Will this 12 acres be enough to meet the requirements of the depot?

Gen. SHARPE. Col. Wood, who is in command of the depot, thinks not. He has been rather urgent that we should buy another large piece of property.

The estimate was submitted with the idea that this was adjoining the property that the Government already owns, and it would be more desirable to lease the other land and put the temporary construction on there during the war. After the war is over I think we can get along very well with the present working space, what we are asking for in this bill, provided we can get some money to reconstruct the buildings, which are very old, and which are really occupying a lot of space there in such a way that we can not take full advantage of the ground we have, because of the character of the construction.

Mr. KAHN. This will amount to \$2,000 an acre?

Gen. SHARPE. That is because many small homes are located there. People have built their homes there.

Mr. KAHN. Will you have to buy the land from them?

Gen. SHARPE. Yes, sir.

Mr. KAHN. Is not \$2,000 an acre a pretty good price for property in that neighborhood?

Gen. SHARPE. This is practically developed property and town lots.

Mr. FIELDS. You spoke of the labor a while ago. Have they had any trouble in getting labor there?

Gen. SHARPE. Not that I know of.

Mr. FIELDS. There has been considerable development in the depot within the last year?

Gen. SHARPE. An enormous development. On one item alone Col. Wood has developed the work so that they are turning out over 10,000 shirts a day.

Mr. FIELDS. How many trunk lines operate out of that town, or have terminals there?

Col. DALY. There are two at the depot.

Mr. FIELDS. I think there are five in the town.

Col. DALY. Jeffersonville is served by the following railroads: Baltimore & Ohio, Cleveland, Cincinnati, Chicago & St. Louis, and Pennsylvania lines; and Louisville, Ky., across the Ohio River from Jeffersonville, Ind., by Baltimore & Ohio, Chesapeake & Ohio, Chicago, Indianapolis & Louisville, Cleveland, Cincinnati, Chicago & St. Louis, Illinois Central, Louisville & Nashville, Louisville, Henderson & St. Louis, Pennsylvania lines, and Southern Railway.

Mr. FIELDS. Is not that depot making practically all the shirts that the Army uses?

Col. DALY. A large portion of them; some few are being made at Philadelphia, but Jeffersonville practically makes them all.

Mr. FIELDS. I was there in November and went all through the plant, and it seems to me they have a good system there.

Gen. SHARPE. They have a good system, but they have a very poor plant.

Mr. FIELDS. I was thinking of the business system.

Gen. SHARPE. That is very good, but Col. Wood would get out much better work if the buildings were adapted to the present business necessities.

Col. DALY. There is a lot of lost space and lost motion in the operation of the depot under the present conditions.

Mr. SHALLENBERGER. I suppose the land is being rented.

Col. DALY. Yes, sir.

Mr. SHALLENBERGER. Would it not be economy to buy it?

Col. DALY. I do not think the rental is so very high. I think it is about \$800.

Mr. SHALLENBERGER. This has been investigated by the proper authorities, and they have reported that this is a fair price?

Col. DALY. Yes; and there is a report describing each piece of property.

Mr. SHALLENBERGER. Is there any money being asked for in any other place for this particular plant?

Col. DALY. There is money being asked for in the sundry civil bill for the buildings.

Mr. FIELDS. How many people are employed there?

Gen. SHARPE. They will turn out 10,000 shirts a day, and that means over 10,000 operatives, just on the shirts. I think they have about 11,000 operatives on the shirts alone.

NOTE.—The following are employed at Jeffersonville:

Permanent employees.....	622
Temporary employees.....	3,311
Pieceworkers.....	120
Sewing women (as pieceworkers).....	21,000

The CHAIRMAN. You could not tell us, I suppose, to what extent the present temporary structures cover the land you desire to purchase?

Gen. SHARPE. No; I could not. I will insert that information.

NOTE.—From 60 to 70 per cent of the area is covered by temporary construction.

Col. DALY. I think all the land it is proposed to purchase is covered with buildings, except one corner.

The CHAIRMAN. Under a lease?

Col. DALY. The buildings were erected by Government funds, and the land is under lease.

The CHAIRMAN. For how long a time?

Col. DALY. Just a year's lease.

The CHAIRMAN. Do you know how much rental the Government is paying?

Col. DALY. I think it is \$800.

The CHAIRMAN. \$800 a year for the 12 acres?

Col. DALY. I do not think we have all the 12 acres. There is one part occupied by a tenant whom we have not been able to get out.

The CHAIRMAN. What I can not understand is this: If the structures amounted to anything, why you would put up structures on land for which you only had an annual lease.

Col. DALY. We had to do that in order to get some place to store the things.

The CHAIRMAN. You can put the full information in regard to this item in the record.

Col. DALY. Yes, sir; it has been inserted.

The CHAIRMAN. The next several items are personal items for relief. Those items have been explained many times.

Col. DALY. I think these are all new items.

The CHAIRMAN. Will you put in the record a statement explaining each one of the items?

Gen. SHARPE. Yes, sir.

(The statements follow:)

HEADQUARTERS NORTHEASTERN DEPARTMENT,
OFFICE OF THE QUARTERMASTER,
Boston, Mass., Aug. 10, 1917.

From: Capt. Frank Geere, Quartermaster Corps.

To: Quartermaster General, Washington, D. C.

Subject: Congressional relief from disallowance by the auditor.

1. Request that steps be taken to obtain my relief by act of Congress for \$29, which was dropped on my October, 1916, account current at Nogales, Ariz., but which was disallowed by the auditor.

2. This sum represents a shortage in a cash shipment of \$116,000 received from the United States Subtreasury at New Orleans, La., as part of an invoice to me by Capt. John P. Hasson, Quartermaster Corps, at El Paso, Tex.

3. When this shipment was received by me, on breaking the sealed packages, there was found to be a shortage in the amount of \$29. Through error I receipted for the entire amount of the invoice, including this \$29 and obtained a survey on the latter. This survey, recommending that I be authorized to drop that sum from my next account current, was duly approved and the report of survey was filed with my October, 1916, account as a voucher on which same was dropped.

4. The auditor, in a different sheet dated May 8, 1917, disallows this amount dropped by survey report, stating "Officer is not entitled to credit for shortage of \$29 on finding of board of survey that the assistant treasurer, New Orleans, was responsible for same in view of the fact that the assistant treasurer denies said responsibility." In a second different sheet dated June 19, 1917, the auditor further remarks, "Credit can not be allowed for shortage in cash unless relieved by act of Congress. He should account for the above-named amount." By reason of this disallowance I have taken up the \$29 on an account current supplementary to my final account current of December, 1916.

5. I have no duplicate copy of this survey to submit with this letter, but must refer you to the copy filed with my account current in the office of the auditor for the War Department, which contains all the evidence in the case to show that although I receipted for this \$29 it never came to my hands and was not actually a part of the shipment in question.

FRANK GEERE,
Captain, Quartermaster Corps.

[First indorsement.]

WAR DEPARTMENT,
OFFICE OF THE QUARTERMASTER GENERAL,
August 23, 1917.

To the AUDITOR FOR THE WAR DEPARTMENT:

1. It is requested that this office be furnished with a copy of the survey proceedings mentioned by Capt. Geere in the within communication and stated as being on file with his account current for October, 1916.

By authority of the Quartermaster General.

THOMAS CRUSE,
Brigadier General, Quartermaster Corps.

[Second indorsement.]

AUGUST 25, 1917.

From: The Auditor for the War Department.

To: The Quartermaster General, United States Army, Washington, D. C.

Herewith is report of survey requested in first indorsement. Please return same to this office for file.

H. R. BARTY, *Auditor.*

[Third indorsement.]

WAR DEPARTMENT,
QUARTERMASTER GENERAL'S OFFICE,
September 1, 1917.

To the Adjutant General of the Army:

Recommending authority to include in relief estimates to be submitted to Congress for the fiscal year 1919, an item relieving Capt. Frank Geere, Quartermaster Corps, United States Army, of accountability for \$29 found deficient in a shipment of \$116,000.

By authority of the Quartermaster General.

D. L. BRAINARD,
Colonel, Quartermaster Corps.

AUGUST 31, 1917.

To the Estimate Branch:

Forwarded for such action as may be deemed proper, attention being invited to the request of the Auditor for the War Department that the report of survey be returned to his office when it has served its purpose.

THOMAS CRUSE,
Brigadier General, Quartermaster Corps.

[Fourth indorsement.]

WAR DEPARTMENT,
ADJUTANT GENERAL'S OFFICE,
September 4, 1917.

To the Quartermaster General;

The recommendation contained in the third indorsement hereon is approved.

By order of the Secretary of War:

JOSEPH F. JANDA,
Adjutant General.

PROPERTY SUBMITTED FOR SURVEY PERTAINING TO CAPT. FRANK GEERE, QUARTERMASTER CORPS.

Gold and silver coin, \$29. ■■

Found short in a shipment of 12 sacks sealed and said to contain \$116,000 received from Wells, Fargo & Co. express, shipped on B/L No. 2348 by Maj. William Elliott, Quartermaster Corps, depot quartermaster, El Paso, Tex., as per Exhibits A, B, and C, accompanying.

I do solemnly swear that the articles of public property named hereon were lost, destroyed, or damaged, in the manner stated, while in the public service.

L. M. RHODES,
Clerk, Quartermaster Corps.

Sworn to before me, and subscribed in my presence, this 18th day of September 1916.

SYDNEY SMITH,
First Lieutenant, United States Army, Retired, Summary Court.

I certify that the loss, destruction, damage, or unserviceability of the articles of public property named hereon was occasioned by unavoidable causes, and without fault or neglect on my part; and that each article listed hereon with a view to elimination by destruction, has been examined by me personally, has never been previously condemned, has become unserviceable in the manner stated herein, and is, in my opinion, worthless for further public use.

FRANK GEERE,
Captain, Quartermaster Corps.

To ———, who, by order of the commanding officer, is appointed surveying officer on the articles of public property named hereon.

J. S. DEAN,
Lieutenant Colonel, Adjutant General, District Adjutant.

I have examined all available testimony in this case, and it is my belief that the bags of gold coin referred to in statement and accompanying certificates and affidavits were short thirty dollars (\$30.00) and one bag of silver in same shipment was over one dollar (\$1.00) making a total shortage in the shipment of twenty-nine dollars (\$29.00). I believe further that the counts made upon receipt of the coin at Nogales were carefully made; that every reasonable precaution was taken to safeguard the public property, and that the loss occurred through no carelessness, fault, or neglect of the responsible and accountable officer. I believe further that the shortage is probably chargeable at the United States Mint, New Orleans, La., and that the replies to inquiries are not specific and clear as to the facts in this case, but are general and irrelevant to this case and not made in proper form as requested.

RECOMMENDATIONS.

That the responsible and accountable officers, Captain Frank Geere, Q. M. C., and Major William Elliott, Q. M. C., be relieved from further responsibility for the said sum of twenty-nine dollars (\$29.00), and that the said sum of twenty-nine dollars (\$29.00) be charged against the Assistant United States Treasurer at New Orleans, Louisiana.

WESLEY KING,
Major, Judge Advocate General's Department.

The property recommended to be destroyed has been personally inspected by me and has no salable value.

F. H. PLUMMER,
Brigadier General Commanding.

NOGALES, ARIZ., August 28, 1916.

We, the undersigned commissioned officers of the Quartermaster Corps, certify that on August 26, 1916, we counted the coin contained in 12 sacks received from the Wells Fargo & Co. Express, shipped on bill of lading No. 2348 from Maj. William Elliott, Quartermaster Corps, El Paso, Tex., and said to contain \$116,000.

That the seals on these sacks were intact and had not been tampered with, and that the count showed the contents to be \$115,971 in ten and five dollar gold pieces and silver dollars.

That we were assisted in this count by Mr. L. M. Rhodes, civilian pay clerk, Quartermaster Corps, who found the same difference.

That these funds were carefully resacked and deposited in the vaults of the First National Bank of Nogales, Ariz., and a second count was made on August 27, 1916, by ourselves and Mr. Rhodes, with the result that the same shortage was found as before.

In view of the above it is believed that an error was made in making up these packages prior to their shipment.

FRANK GEERE,
Captain, Quartermaster Corps.

F. B. SHELLEY,
Second Lieutenant, Quartermaster Corps.

NOGALES, ARIZ., *September 18, 1916.*

STATE OF ARIZONA.

County of Santa Cruz, City of Nogales, ss:

Personally appeared before me, the undersigned authority, one L. M. Rhodes, a civilian clerk in the employ of the Quartermaster Corps, United States Army, who, being first duly sworn, deposes and says:

That on August 26, 1916, he assisted Capt. Frank Geere, Quartermaster Corps, in counting the contents of 12 sacks received from Wells, Fargo & Co. Express at Nogales, Ariz., which was shipped on bill of lading No. 2348, dated August 26, 1916, by Maj. William Elliott, Quartermaster Corps, El Paso, Tex., and was said to contain \$116,000.

That the seals on these sacks when received were unbroken and the sacks had no appearance of having been opened or tampered with and that the seals were broken by Capt. Geere in my presence.

That Capt. Geere, Second Lieut. F. B. Shelley, and myself counted the contents and found them to contain \$115,971.

That the money was resacked and placed in the vaults of the First National Bank of Nogales, Ariz., and was again counted by the above-named officers and myself on August 27 with the same result obtained on August 26.

That from the foregoing facts it is my belief that this shortage, to wit, \$29, occurred during the making up of the packages prior to shipment.

L. M. RHODES,

NOGALES, ARIZ.

Subscribed and sworn to before me this 18th day of September 1916.

SYDNEY SMITH,

First Lieutenant, United States Army, Retired, Summary Court.

UNITED STATES WAR DEPARTMENT,
QUARTERMASTER CORPS,
El Paso, Tex., August 26, 1916.

Received from William Elliott, major Q. M. Corps, by the Wells Fargo & Co. Express Company the public property hereinafter described, in apparent good order and condition (contents and value unknown), to be forwarded subject to conditions stated on the reverse hereof, from El Paso, Texas, to Nogales, Arizona, by said company and connecting lines, there to be delivered in like good order and condition to as marked

SST 220.

Capt. Frank Geere, Q. M. Corps, Nogales, Ariz.

6 sacks, \$110,000.00 in gold

6 sacks, 6,000.00 in silver

116,000.00

U. S. property.

S. O. 187 Hd. So. Dept., July 25, 1916.

D. Q. M., San Fee, Cal.

QUARTERMASTER BASE,
Nogales, Ariz., August 28, 1916.

From: Disbursing officer.

To: Capt. John P. Hasson, Q. M. Corps, El Paso, Tex.

Subject: Transfer of funds.

1. Reference your invoice dated August 26, 1916, for one hundred twenty-five thousand (\$125,000.00) dollars, pay of the Army 1917, L/A 2-1712, inform you that on counting the first shipment of one hundred sixteen thousand (\$116,000.00) dollars, of this amount there was found to be only one hundred fifteen thousand nine hundred seventy-one (\$115,971.00) dollars in the twelve sacks billed, in connection with which certificate and affidavits are enclosed.

2. Apparently the shortage occurred at the bank in making up the sacks.

3. Request that the difference of twenty-nine (\$29.00) dollars be sent me by check, when your invoice will be receipted.

FRANK GEERE,
Captain, Q. M. Corps.

[First indorsement.]

OFFICE DEPOT QUARTERMASTER,
El Paso, Tex., August 30, 1916.

To CAPT. FRANK GEERE, captain, Q. M. Corps, Nogales, Ariz.

1. This shipment of one hundred sixteen thousand (\$116,000) dollars was made to you on the 25th and consisted of five sacks of gold in tens, twenty thousand dollars each, one sack gold, fives, ten thousand, six sacks silver, one thousand dollars each. It was part of a shipment received from the mint at New Orleans and came in on the same train that it was subsequently shipped on. The money was not taken from the train, but was merely retagged with your name by me.

2. In view, then, of this discrepancy request you state more fully just in which sack this shortage occurred and that you mail me the "count slips" that should be in each sack.

3. These sacks were sealed and received from the quartermaster at New Orleans and bore stamp of mint count.

JOHN P. HASSON,
Captain, Q. M. Corps.

[Second indorsement.]

DISBURSING OFFICER, Q. M. BASE,
Nogales, Ariz., September 3, 1916.

To Capt. JOHN P. HASSON,
Q. M. Corps, El Paso, Tex.

1. Returned. There were no "count slips" in any of the sacks, and on some of the tags there was no amount stated on same.

2. In view of this it is not possible to state in which sack or sacks the shortage existed, nor as to the exact coins that were short. It is known, however, that there was one silver dollar ahead in one sack and from this fact it would appear that there were three ten-dollar gold pieces short in one or more of the other sacks.

3. The receipt for your invoice of the \$125,000.00, of which this shipment was a part, is being held here until the investigation of this shortage is completed, when it will be accomplished. A statement to that effect will be filed with my account current for August if this matter is not completed by that time, and it is suggested that you do the same.

FRANK GEERE, Captain, Q. M. Corps.

[Third indorsement.]

OFFICE DEPOT Q. M.,
El Paso, Tex., September 6, 1916.

To Maj. JOHN STAFFORD, U. S. A., retired,
A. G. M., New Orleans, La.

1. The facts in the case of this shipment were as follows: On August 25th the shipment of money was received from you as follows: Ten sacks of gold, \$200,000, in tens; seven sacks of gold, \$130,000, in fives; and fifteen sacks of silver standard. Two sacks of halves, two sacks of quarters, one sack of dimes, one sack of nickels and one sack of pennies. Under instruction from the Department Quartermaster to expedite a shipment if possible that night, to Nogales, I met the train containing this shipment

and without taking the money off the car, immediately transshipped five sacks of tens, \$100,000; one sack of fives, \$10,000; and six sacks of standard, \$6,000; making this first shipment of \$116,000 noted in this letter of Captain Geere.

2. From Captain Geere's second indorsement it would appear that in this gold shipment, there were three ten-dollar pieces short and in the silver there was one one-dollar ahead, making a total shortage of twenty-nine dollars (\$29.00).

3. As this shipment was received in the original sacks bearing stamp of United States Mint and as such was accepted by the bank here, I presumed that the transshipment to Nogales would be accepted in the same way and so accomplished your cash receipt. Your assistance is requested in trying to locate this shortage and, as you can see, my cash receipt from Captain Geere for \$125,000 is being held up pending the outcome of this shortage.

JOHN P. HASSON, *Captain, Q. M. Corps.*

(Fourth indorsement).

OFFICE QUARTERMASTER CORPS,
New Orleans, La., September 9, 1916.

To Capt. JOHN P. HASSON, *Asst. D. Q. M., El Paso, Tex.*

1. The seventeen sacks of gold constituting the shipment in question were personally received by me from the assistant treasurer at the Treasury in the original sacks, each of which bore a certified stamp of the count as made by special examiners of the Treasury Department, with the quantity marked thereon.

2. It is practically impossible that the error existed in the gold as all sacks were weighed, found to contain the exact correct weight; they were further balanced with each other, and two sacks were opened and counted and found to be correct, which two sacks were again used as a balance for the others.

3. The silver is recounted as received by the assistant treasurer and each sack sealed and tagged and bears the initials of the man who did the counting, also after being counted and sacked each sack is weighed. From the above it is clear that it is almost impossible for this mistake to have occurred at New Orleans.

4. These funds were received by me at the Treasury in person and there transferred to the Wells, Fargo Express Co., receipt being secured for the same on the spot within the guarded inclosures of the Treasury.

5. In this connection, attention is invited to the fact that only about one-third of the shipment was sent to Capt. Geere and that no discrepancies were found in the remainder of the shipment.

6. The undersigned is of the opinion that the shortage in question could have only occurred at Nogales, Ariz. It is clearly shown throughout this communication that the original packages were received in tact; that they were not tampered with. Therefore the shortage could have only occurred at either the Treasury at New Orleans or at Nogales, and there is very little possibility of the error having occurred here as the money is handled by experts who are employed at nothing else.

JNO. STAFFORD,
Major U. S. A., Ret., A. Q. M., Quartermaster.

[Fifth Indorsement.]

OFFICE D. Q. M.,
El Paso, Tex., September 15, 1916.

To Captain Frank Geere, *Q. M. Corps, Nogales, Ariz.*

1. Returned, inviting your attention particularly to paragraph 2 of the fourth indorsement.

2. Under the conditions surrounding this shipment I can not see where the responsibility lies with my count, and the regulations governing such shipments are silent on such matters. I believe that it would be to the best interests of both of us to consider this shipment as coming within the provisions of #668 Army Regulations, 1913.

JOHN P. HASSON,
Captain, Q. M. Corps.

A true copy of letter and indorsements:
OLIVER S. PERRY,
Captain 2nd Montana Infantry.

NOGALES, ARIZ., *September 21, 1916.*

We, the undersigned commissioned officers, certify that at 1.30 p. m. on August 26, 1916, we went to the office of the Wells, Fargo & Co. Express at Nogales, Arizona, to receive a shipment of one hundred sixteen thousand (\$116,000) dollars in gold and silver coin, shipped from the quartermaster depot at El Paso, Texas, as part of the sum of one hundred twenty-five thousand (\$125,000) dollars for the payment of troops.

That we were accompanied by a detail of one noncommissioned officer and seven privates from the provost guard as guard during the handling of these funds.

That at the express company's office the room was cleared of every one except the cashier and one of the company's employees, Captain Geere, Lieutenant Shelly, and Mr. L. M. Rhodes, a quartermaster civilian clerk, while these sacks were removed from the safe and checked.

That the sacks were all sealed and these seals were intact.

That the sacks were carried in one trip from the express office across the walk to an auto truck, with the guards surrounding those carrying the sacks, and that the truck, with the guards, Captain Geere, and Mr. Rhodes on it, proceeded direct to the offices of the base quartermaster and the sacks were similarly carried into the room used as Captain Geere's office.

That the doors of this office were then closed and locked, a guard of two military policemen stationed outside each entrance, Captain Geere, Lieutenant Shelly and Mr. Rhodes only remaining inside, and that these three then proceeded to cut the seals of the sacks and count the coin, which was done in full sight of all three.

That this was done by actually counting the coins and not by stacking and sizing the stacks against each other. With the exception of four or five sacks, the contents of each was counted separately and then the change for each organization was sacked together. Of these sacks not first separately counted, two were taken as original packages, without counting, and so used in making up some organization's change, and the other three—one of ten (10.00) dollar gold pieces, one of five (5.00) dollar gold pieces and one of one (1.00) dollar silver pieces—were not first counted separately, as it was getting late, but were used directly for making up the change packages.

That the total of these packages and the remaining coin not made into such packages aggregated one hundred fifteen thousand nine hundred seventy-one (\$115,971) dollars.

That several of the sacks received from the express company had no values marked on the tags, but only the name of the shipping officer.

That none of the sacks contained any count slips, such as were usually placed in sacks from the mint with the count and checker's initials thereon.

That, as it was 7.30 p. m. when the count was completed, it was decided to recount on the following day, so the sacks, each labeled with the amount of its contents, were placed on the autotruck and taken, under the same guard, to the First National Bank of Nogales, where they were placed in the vaults of the bank in the presence of Captain Geere, Lieutenant Shelly, and Mr. Rhodes.

That the following day, August 27, 1916, Captain Geere, Lieutenant Shelly, and Mr. Rhodes went to the First National Bank at 1.30 p. m., and again counted this coin, this time actually counting every coin and checking the contents of the sacks as they had been made up and labeled the previous day.

That this count was made by all three, sitting at the same table in full view of each other, Mr. Richardson, assistant cashier of the bank, and one of his employees, with two military policemen as guards, being in another part of the room in sight of the table.

That from the foregoing facts we believe it was impossible for any of the coins to have been dropped or lost during either count, and that the shortage of twenty-nine (\$29.00) dollars occurred prior to receipt of the money at Nogales, and that the shortage existed in one of the four or five sacks not separately counted or used as an original package at the first count.

That as one of the sacks of silver dollars, supposed to contain one thousand (1,000.00) dollars, was found to contain one (1.00) dollar over, we believe that there were gold pieces short in the other sacks to the amount of thirty (30.00) dollars.

FRANK GEERE,
Captain, Quartermaster Corps.

F. B. SHELLEY,
Second Lieutenant, Quartermaster Corps.

NOGALES, ARIZ., September 21, 1916.

STATE OF ARIZONA,

County of Santa Cruz, Town of Nogales, ss:

Personally appeared before me, the undersigned authority, one L. M. Rhodes, a civilian clerk in the employ of the Quartermaster Corps, U. S. Army, who, being first duly sworn, deposes and says:

That at 1.30 p. m. on August 26, 1916, he accompanied Captain Frank Geere and Lieutenant F. B. Shelly, Q. M. C., to the office of the Wells, Fargo & Co. Express at Nogales, Arizona, to receive a shipment of one hundred sixteen thousand (\$116,000.00) dollars in gold and silver coin, shipped from the Quartermaster depot at El Paso, Texas, as part of the sum of one hundred twenty-five (\$125,000.00) dollars for the payment of troops.

That they were accompanied by a detail of one noncommissioned officer and seven privates from the provost guard, as guard during the handling of these funds.

That at the express company's office the room was cleared of every one except the cashier and one of the company's employees, Captain Geere, Lieutenant Shelly and himself, while these sacks were removed from the safe and checked.

That the sacks were all sealed and these seals were intact.

That the sacks were carried in one trip from the express office across the walk to an auto truck, with the guards surrounding those carrying the sacks, and that the truck with the guards, Captain Geere, and himself on it, proceeded direct to the office of the base quartermaster and the sacks were similarly carried into the room used as Captain Geere's office.

That the doors of this office were then closed and locked, a guard of two military policemen stationed outside each entrance. Captain Geere, Lieutenant Shelly and himself only remaining inside, and that these three then proceeded to cut the seals of the sacks and count the coin, which was done in full sight of all three.

That this was done by actually counting the coins and not by stacking and sizing the stacks against each other. With the exception of four or five sacks, the contents of each was counted separately, and then the change for each organization was sacked together. Of these sacks not first separately counted, two were taken as original packages, without counting, and so used in making up some organization's change, and the other three—one of the ten (10.00) dollar gold pieces, one of five (5.00) dollar gold pieces and one of one (1.00) dollar silver pieces—were not first counted separately as it was getting late, but were used directly for making up the change packages.

That the total of these packages and the remaining coin not made into such packages aggregated one hundred fifteen thousand nine hundred seventy-one (\$115,971.00) dollars.

That several of the sacks received from the express company had no values marked on the tags, but only the name of the shipping officer.

That none of the sacks contained any count slips, such as are usually placed in sacks from the mint with the count and checker's initials thereon.

That, as it was 7.30 p. m. when the count was completed, it was decided to recount on the following day, so the sacks, each labeled with the amount of its contents, were placed on the autotruck and taken, under the same guard, to the First National Bank of Nogales, where they were placed in the vaults of the bank in the presence of Captain Geere, Lieutenant Shelly, and himself.

That the following day, August 27, 1916, Captain Geere, Lieutenant Shelly, and himself went to the First National Bank at 1.30 p. m. and again counted this coin; this time actually counting every coin and checking the contents of the sacks as they had been made up and labeled the previous day.

That this count was made by all three, sitting at the same table in full view of each other, Mr. Richardson, assistant cashier of the bank, and one of his employees, with two military policemen as guards, being in another part of the room in sight of the table.

That from the foregoing facts, he believes it was impossible for any of the coins to have been dropped or lost during either count, and that the shortage of twenty-nine (29.00) dollars, occurred prior to receipt of the money at Nogales, and that the shortage existed in one of the four or five sacks not separately counted or used as an original package at the first count.

That as one of the sacks of silver dollars, supposed to contain one thousand (1,000.00) dollars, was found to contain one (1.00) dollar over, we believe that there were gold pieces short in the other sacks to the amount of thirty (30.00) dollars.

And further deponent sayeth not.

L. M. RHODES.

Subscribed and sworn to before me this 21st day of September, 1916.

SYDNEY SMITH,
1st Lieut., U. S. A., Retired, A. Q. M.,
Summary Court.

HEADQUARTERS NOGALES DISTRICT,
Camp Stephen Little, Nogales, Ariz., September 21, 1916.

From: Survey officer.

To: Assistant Treasurer U. S., New Orleans.

Subject: Shortage \$29 shipment of money from Maj. William Elliott, Q. M. C., August 26, 1916, to Capt. Frank Geere, Q. M. C., Nogales, Ariz., received by Wells, Fargo Express, El Paso, Tex.

1. Reference is had to inclosed copies of report of survey and attached affidavit, certificates, copy of B/L, and correspondence.

2. For purpose of enabling survey officer to make report and recommendations, as by Army Regulations provided, request is made upon assistant United States treasurer at New Orleans for certificates of officers and affidavits of any persons who assisted in making and sealing the packages of gold and silver referred to in the accompanying orders.

3. Particular attention is directed to the statement in joint certificate of Capt. Frank Geere and Lieut. Shelly, and to affidavit of L. M. Rhodes, this date, to the absence of tags, seals, and count slips, other than Wells, Fargo tags. It is requested that certificates and affidavits submitted show the counting of this money, its tagging and sealing, with what kind and character of seals, what disposition was made of "count slips," if any, and what marks or notations, if any, were made on or in the several sacks designating contents. Certificate of Capt. John P. Hasson, Q. M. C., is also requested covering details of shipment to Capt. Frank Geere, Q. M. C., Nogales, and this communication will be forwarded to Capt. Hasson at El Paso, Tex., with accompanying papers for that purpose. Certificate of Maj. John Stafford, U. S. A., retired, A. Q. M., quartermaster at New Orleans, is requested covering details of shipment to Capt. Hasson at El Paso.

4. Please expedite.

WESLEY E. KING,
Major, Judge Advocate, Nogales District.

NEW ORLEANS, LA., September 25, 1916.

WESLEY E. KING,
Major, Judge Advocate, Nogales, Ariz.

SIR: Referring to your letter of the 21st instant, relative to a shortage of \$29 in a shipment of coin from Maj. William Elliott, Q. M. C., August 23, 1916, to Capt. Frank Geere, Q. M. C., you are advised that all packages or coin shipped from this office are tagged with the amount of the contents stated thereon and the date and the initials of the person putting up the packages.

The only exception to the rule is in the case of bags of new gold coin received from the mint which bear no tags but have the amount stamped thereon. Any shortage in such coin, when delivered to Maj. Stafford in the office, would have been discovered upon its being weighed against carefully counted test bags.

Your attention is invited to the statement of Maj. John Stafford as to the manner in which this particular shipment was handled in this office. This statement is strictly in accordance with the facts in the case.

The papers submitted by you are returned herewith.

Respectfully,

JOHN BURKE,
Treasurer United States, in charge ad interim of
Office of Assistant Treasurer, United States.

GEO. FORT,
Assistant Treasurer United States.

APRIL 27, 1917.

HON. JOHN BURKE,
Treasurer of the United States,
Washington, D. C.

DEAR MR. BURKE: I am handing you herewith a file of correspondence relative to the loss of \$29 disclosed in the accounts of Capt. Frank Geere, Quartermaster Corps, U. S. Army, and have to request that you review the correspondence and advise me, with a view to placing the responsibility. The correspondence appears to make it quite clear that Capt. Geere did not receive the money, but pending investigation I am withholding credit in his accounts.

Trusting that I may be favored with an early reply, with the return of these papers, I remain,

Respectfully, yours,

Auditor.

TREASURY DEPARTMENT,
OFFICE OF TREASURER,
Washington, April 28, 1917.

AUDITOR FOR THE WAR DEPARTMENT,
Washington, D. C.

SIR: With reference to your letter of the 27th instant requesting this office, if possible, to place the responsibility for a shortage of coin in a shipment of \$116,000 made to Capt. Frank Geere at Nogales, Ariz., you are advised that I was in charge of the subtreasury at New Orleans at the time this shipment was made and remember the transaction distinctly.

The gold coin was put up in bags containing \$5,000 each, under lead seals. Four of these bags were placed in a larger bag, which was also sealed with a lead seal. A test bag was prepared by counting one of these \$5,000 bags in the presence of Maj. Stafford, and the same was used as a balance bag in balancing the other coin composing the shipment. The scales upon which this coin was balanced would show a variance of weight between a silver 10-cent piece and a copper penny, so that if a single coin had been removed from any bag it would have been easily discernible.

I am not in a position to advise as to the placing of responsibility, but can only state that the coin referred to was delivered to Maj. Stafford in the subtreasury, and that it was all there at that time.

The correspondence forwarded with your letter of the 27th instant is returned herewith.

Respectfully,

GEO. FORT, *Assistant Treasurer.*

(Relief of Col. Thos. G. Hanson, \$181.26.)

JANUARY 10, 1917.

The COMPTROLLER OF THE TREASURY,
Washington, D. C.

1 The auditor for the War Department has made disallowances in part of five vouchers for February, March, April, May and June, 1916, in difference sheet No. 3, certificate No. 39976, dated December 15, 1916, and as I do not agree with the auditor's findings as set forth therein, appeal from such disallowances is hereby made, as follows: February, 1916. Voucher 102:

"Item 105. Press work has been paid for on the basis of two tokens and the statement is made that this item was run through the press twice on account of down rules. The contractor has been paid double price for composition and the rules should have been set in the form, thus obviating the necessity of running this item through the press twice. Overpayment 25 cents.

106. Same remarks as to previous item: overpayment 50 cents.

125. Payment should have been made for two tokens instead of four; overpayment 50 cents.

128. Overpayment account of presswork 25 cents.

129. Overpayment account of presswork \$2.25.

133. Overpayment of \$3.00 on these items on account of presswork.

134. Overpayment of \$3.00 on these items on account of presswork.

135. Overpayment of \$3.00 on these items on account of presswork.

136. Overpayment of \$1.00 on these items on account of presswork.

137. Overpayment of \$1.00 on these items on account of presswork."

* * * * *

In this connection attention is invited to paragraph 6 of letter dated December 12, 1916, from Lieut. Colonel W. D. Newbill, Q. M. Corps, appealing from similar disallowances of the auditor on items of printing furnished by the same contractor, Blair-Murdock & Co.

With reference to items 133, 134, and 135, as submitted to the auditor, it is maintained that the work is properly classed as double-price composition. The contract provides "No allowance will be made for machine ruling when used in lieu of printed ruling." No charge is made for machine ruling as such, and as the ruling was necessary, the allowance for presswork appears to be entirely proper. The size of the paper used made it necessary to run it through the press twice, the largest press available being 12 by 18, while the paper is 14 by 18. It is also submitted that the price charged for this job is a reasonable one; that work for which provision can not possibly be made is bound to be presented to the contractor from time to time, due to the exigencies of

the service; that the Government desires only a reasonable return for the money expended for services and material provided by the contractor; and that any reputable printer will certify that the work performed on his job entitles the contractor to the prices charged by him and the allowance made by me.

The instructions for the work on items 136 and 137 are as follows:

"Fifty each of inclosed forms marked 'Copy,' weight of paper and horizon-ruling to be the same as that on paper attached marked 'Sample.' Care will be taken to see that the sheets are the same size as sample copies, and that ruling and spacing are exactly the same, except as to horizontal ruling provided above."

2. February. Voucher 102:

"Item 107. Presswork on this item should have been paid for on the basis of 16 tokens; overpayment \$4.

115. Overpayment on account of presswork, 75 cents.

119. Payment should have been made for 28 tokens. No allowance for running job through press twice can be made where double price composition has been paid. Overpayment \$18."

* * * * *

Item 107 is a pamphlet consisting of 8 sheets printed on both sides. It is maintained that this entitled the contractor to 16 tokens for each 250 copies, or 32 tokens for 500 copies.

Item 115 is a pamphlet consisting of 4 sheets printed on both sides, or 8 tokens.

Item 119 consists of 6 sheets printed on both sides, 12 tokens, and the cover, 1 token, 13 tokens in all for the job; 800 copies, making the total of 52 tokens as paid.

* * * * *

3. February. Voucher 102:

"Item 109. The contractor has charged the regular price for composition on this item plus a charge of \$40.40 for special work. This item can not properly be classed as special work but should have been paid for at the regular rates for composition and presswork. Overpayment \$20.40.

110. Payment should have been made for 9,047 ems and 12 tokens. Overpayment \$3.40.

120. Payment should have been made at the regular rates for composition, presswork, and perforating; overpayment 46 cents.

121. Payment should have been made for 2,173 ems and 1 token; overpayment \$1.29.

126. Composition \$2.58, presswork \$4.50, overpayment \$4.90.

127. This is the same composition as the previous item. Payment should only have been made for two tokens; overpayment \$3.48."

* * * * *

In connection with these items the contract provides "Special work, including composition and presswork complete—Letter and note headings and envelopes—* * * For first 100 or less, 60 cents; for subsequent 100, 20 cents"; and further, "That the contractor shall furnish the necessary material and skilled labor to do promptly all printing and ruling and furnish the paper and cardboard for same that required."

It is submitted that this is special work as contemplated in the contract in that the items are letterheads; that the contractor is entitled to an allowance for composition in view of the excessive amount of composition required over that contained in an ordinary letterhead; further, that as the stock is furnished by the party of the first part the contractor is deprived of any profit which would accrue on material furnished, which may be required under the contract.

4. February. Voucher 102:

"Item 138. Composition on this item should have been paid for on the basis of may be 5,630 ems per page for 25 pages and 1,890 ems for one page, a total of 148,890 ems; overpayment, \$61.61.

139. Composition should have been paid for on the basis of 4,536 ems per page for 78 pages, and 1,470 ems for one page, making a total of 353,803 ems. 40 tokens is the proper charge for presswork. Overpayment of \$55.22."

These items are indexes to general and special orders. The same remarks as to ruling and presswork apply as in paragraphs 1 and 2 of this letter.

5. * * *

6. * * *

7. * * *

8. Copies of the work in question obtained from the office of the department quartermaster, Western Department, are inclosed. It is requested that the inclosures be returned to that office when no longer required.

TREASURY DEPARTMENT,
Washington, April 9, 1917.

Appeal No. 26651.

1. Lieutenant Colonel Thomas G. Hanson, Quartermaster Corps, U. S. Army, applied January 22, 1917, for revision of the action of the Auditor for the War Department in disallowing, per settlement No. 39976, dated December 15, 1916, credit in part for certain payments, in the amount of \$666.61, hereinafter enumerated, made to the Blair-Murdock Company, of San Francisco, Cal., for printing under contract of June 14, 1916.

2. The items disallowed will be considered in groups, as follows:

"February, 1916. Voucher 102:

"Item 105. Presswork has been paid for on the basis of two tokens and the statement is made that this item was run through the press twice on account of down rules. The contractor has been paid double price for composition and the rules should have been set in the form, thus obviating the necessity of running this item through the press twice; overpayment, 25.

106. Same remarks as to previous item; overpayment, 50 cents.

125. Payment should have been made for two tokens instead of four; overpayment, 50 cents.

128. Overpayment account of presswork, 25 cents.

129. Overpayment account of press work, \$2.25.

133, 134, 135. Overpayment of \$3.00 on these items on account of presswork.

136, 137. Overpayment of \$1.00 on these items on account of presswork.' "

* * * * *

3. In decision of March 21, 1917 (80 MS. Comp. Dec., 1192), involving similar charges in the accounts of Lieutenant Colonel W. D. Newbill, Quartermaster Corps, U. S. Army, under this same contract, it was said:

4. "The decision in this case depends upon the determination of the proper method of counting impressions for work performed under the contract; and, with respect to this question, the contractor provides, in article 9, as follows:

5. "Presswork.—A token consists of 250 impressions, and where the press on hand is large enough to print with one impression two or more pages of the job or book forms the allowances for presswork will be in accordance therewith, viz: One impression only for each copy of a job, etc., regardless of the number of pages that can be properly placed at one time on the largest press named in the contract, printed and cut to suit the purpose required.'

6. "It will be seen from the article quoted that the unit of measure with respect to payment therein provided was the token, which was to consist of 250 impressions. In connection with the computation of impressions, in view of the provision of this article to the effect that, where the press on hand is large enough to print, with one impression, two or more pages of a job, etc., the allowance for presswork would be in accordance therewith—that is, on the basis of one impression and of the fact that, in article 2 of the contract, the contractor is expressly required to have one press measuring at least 12 x 18", it would appear that, in computing the number of impressions, the basis was to be the greatest number of pages of a job that properly could be printed at one impression on the presses at hand, the nature of each job being taken into consideration, without regard to what press had actually been used or the number of impressions that had actually been made.

7. "In other words, under the provisions of this contract the contractor, in printing the jobs, was to be paid on the basis of the least number of impressions that might have been made had the work been done in a 'workmanlike' manner as provided in article 1 of the contract."

8. In this connection it is noted that in article 2 of the contract it is stated that the presses which would be furnished by the contractor were as follows: 8" x 12" Gordon, 10" x 15" Gordon, 10" x 15" Gordon, 12" x 18" Gordon.

9. All of the above-enumerated items, with the exception of items 133, 134, and 135, come within the ruling announced in the foregoing decision of March 21, 1917, and the disallowances made by the auditor are therefore proper, and are affirmed.

10. Items 133, 134, and 135 consist of printing estimate blanks on sheets of paper 14" x 18". It is contended that, in order to print these blanks on the 12" x 18" press, which is the largest one specified under the contract, it was necessary to run through the press twice. The samples furnished do not have the appearance of having been run through the press twice. They appear to have been printed on a cylinder or other larger press. At any rate, even if they were run through the press twice, the charge for presswork is excessive, as only four tokens should be charged in that case for each of the three items. The auditor's disallowance is affirmed.

"2. February. Voucher 102:

"Item 107. Presswork on this item should have been paid for on the basis of 16 tokens; overpayment, \$4.00.

115. Overpayment on account of presswork, 75 cents.

119. Payment should have been made for 28 tokens. No allowance for running jobs through press twice can be made where double-price composition has been paid. Overpayment, \$18.00."

* * * * *

11. All of these items, except item 61, represent printing of pamphlets on sheets printed on both sides. Presswork is charged on the basis of one token for each 250 sheets. The auditor allows one token for each 250 impressions of two sheets each, as in each case two sheets could have been printed at one impression with presses specified by contract, and disallowed the balance. These disallowances are in accord with the ruling in the foregoing decision of March 21, 1917, and are affirmed.

12. Item 61 consists of printing 20,000 small recruiting cards on both sides. Payment was made for 160 tokens, 80 for each side. Both sides of the cards apparently were, or should have been, set up and printed with one impression of the press. In this way 10 000 cards could have been printed on the front side and 10 000 on the reverse side in 40 tokens. Then, by reversing the cards and running them through the press again, they could have been printed on the remaining side in 40 tokens, making a total of 80 tokens necessary for the job, provided only two forms could be set up and printed in the press at one time. (80 MS. Comp. Dec., 257, Jan. 22, 1917.) The cardboard used, as specified by the contract, is 22" x 28", making it possible to set up and print more than two forms with one impression. However, in the absence of evidence to the effect that this was actually done, no further disallowance will be made in this case. In the future, such items should be investigated before payment is made. The auditor's disallowance is affirmed.

"3. February. Voucher 102:

"Item 109. The contractor has charged the regular price for composition on this item plus a charge of \$40.40 for special work. This item can not properly be classed as special work, but should have been paid for at the regular rates for composition and presswork. (Overpayment, \$20.40.

110. Payment should have been made for 9,047 ems and 12 tokens. Overpayment, \$3.40.

120. Payment should have been made at the regular rates for composition, presswork, and perforating; overpayment, 46 cents.

121. Payment should have been made for 2,173 ems and 1 token; overpayment, \$1.29.

127. This is the same composition as the previous item. Payment should only have been made for two tokens; overpayment, \$3.48.

126. Composition, \$2.58; presswork, \$4.50; overpayment, \$4.90."

* * * * *

13. These items have been paid for as letter headings, but, from the samples furnished, they appear to be letter forms with markings upon the left-hand margin showing divisions of page, and requiring a type form nearly the full size of the page. This printing does not constitute letter headings or other special work under the terms of the contract, and payment should have been made as for ordinary printing at the regular rate of 25 cents per 1,000 ems for composition and 25 cents per token of 250 impressions, or fraction thereof, for presswork and perforating, as provided by the contract. (79 MS. Comp. Dec. 505, November 18, 1916.) The auditor's disallowances are affirmed.

"February. Voucher 102:

"Item 138. Composition on this item should have been paid for on the basis of 5,880 ems per page for 25 pages and 1,890 ems for one page, making a total of 148,890 ems. 42 tokens is the proper charge for presswork. Overpayment, \$61.61."

14. "139. Composition should have been paid for on the basis of 4,536 ems per page for 78 pages, and 1,470 ems for one page, making a total of 353,808 ems. Forty tokens is the proper charge for presswork. Overpayment, \$55.22."

15. These items represent printing in pamphlet form of indexes to general and special orders. The composition in item 138 is 3½ by 5½ inches for 25 pages, which, in six-point type, and allowing for double-price composition, is equivalent to 42 by 70 by 2 inches, or 5,880 ems for each page. The outside page is 3½ by 3½ inches, or 1,890 ems, making a total of 148,890, as allowed by the Auditor. The presswork

should have been paid for on the basis of 42 tokens, as allowed by the Auditor, as two sheets could easily have been printed with one impression.

16. The composition in item 139, allowed at price-and-one-half, is equivalent to 4,536 ems for 78 pages, and 1,470 ems for one page, and 40 tokens for presswork. The Auditor's disallowances are affirmed.

17. * * *

18. * * *

19. * * *

20. These items represent printing of circulars to bidders, 8½ by 28 inches, printed on both sides. The amounts paid for composition have been allowed by the Auditor. His disallowances consist of overcharges for presswork and amount of paper necessary to be used. Payment has been made on the basis of 6 tokens for each 250 circulars, it being necessary to make four impressions to print each sheet, and it is alleged that two pages of each sheet were run through the press a second time on account of down rules. The down rules should have been set in the form in the first instance, making the additional impression of two pages unnecessary. (80 MS. Comp. Dec., 1192, Mar. 21, 1917.) The size of the paper used was 22 by 34 inches, so that two circulars could easily have been printed from one sheet of paper. Payment has been made on the basis of one sheet of paper for each circular. The Auditor's disallowances are affirmed.

21. * * *

22. * * *

23. * * *

24. * * *

25. * * *

26. Revision is limited to items of which revision is requested, and the right of revision as to the remainder of the account is reserved.

W. W. WARWICK, *Comptroller.*

MAY 22, 1917.

Request for refundment.

Mr. RALPH K. BLAIR.

207 Highland Avenue, Buffalo, N. Y.

SIR: The Comptroller of the Treasury has suspended the sum of \$666.61 in my accounts for amounts paid for printing during the fiscal year 1916. Of the sum suspended \$485.35 was paid to the National Surety Co., which they have been requested to return, and which they are returning, leaving a balance paid the Blair-Murdock Co. of \$181.26.

2. In view of the fact that this latter amount was as stated above, paid to the Blair-Murdock Co. of which you were a member as evidenced by your signing the contract for printing for the fiscal year in question, I respectfully request that you refund to me the sum paid you (\$181.26) at your earliest convenience in order that my accounts may be cleared of the entire suspension in this case.

3. In this connection you are advised that if you do not refund, I shall be forced to pay this amount out of my salary, as the money was paid to your company in good faith, and as I have gone to the last court of recourse in an effort to have the suspension removed you can readily understand my efforts in trying to get refundment from you. An early return of the overpayment in question will be deeply appreciated.

4. I expect at any time to be ordered away from my present station.

Yours, truly,

THOMAS G. HANSON,
Lieut. Col., Q. M. Corps.

WAR DEPARTMENT,
HEADQUARTERS, WESTERN DEPARTMENT,
(OFFICE OF THE DEPARTMENT QUARTERMASTER,
San Francisco, Cal., February 28, 1916.

From: Department Quartermaster,

To: National Surety Company, No. 105 Montgomery Street, San Francisco, California.

Subject: Contract for printing Blair-Murdock Co., F. Y. 1916.

1. In the matter of contract entered into by The Blair-Murdock Company, of San Francisco, California, with the United States Government (dated June 14th, 1915), for furnishing necessary material and labor, etc., for printing, etc., required at headquarters, Western Department, during the fiscal year commencing July 1st, 1915,

and ending June 30th, 1916, you are advised, as surety under said contract, that said contractor is not now, nor for some days past, observing or performing the conditions of said agreement, that "The contractor must be prepared to keep the office open and ready for work from 9.00 a. m. until 4.30 p. m., daily, Sundays and legal holidays excepted, to promptly comply, and to furnish proof and finish work without delay, so as not to retard public business."

2. Under the circumstances of the failure of the contractor to do work required under the contract and to comply with the stipulations of the contract according to the true intent and meaning thereof, notice is hereby given of the procedure authorized to be taken under conditions recited herein, i. e., "to supply the deficiency by purchase in open market, special contract, or in such other manner as the contracting officer may elect, and the contractor shall be charged with the expense and additional cost, if any, resulting from such failure."

3. Definite advice is required as to whether the National Surety Company, as surety, as aforesaid, elects to take over the Blair-Murdock Company's contract and continue the same to date of completion. In the event the National Surety Company elects to take over the said contract the Department Quartermaster should be informed of the agency through which the printing shall be accomplished.

4. Notice is given that printing required at headquarters, Western Department, is being purchased in the open market pending reply to this letter of notification of the failure of the contractor, The Blair-Murdock Company, to perform work under its contract.

5. Copy of contract referred to herein is enclosed for your information, special reference being had to paragraphs 3 and 17 thereof.

6. For your further information, it may be remarked that the bond as executed by the National Surety Company, to cover the said contract, is of date June 14th, 1915, and in amount of \$1,000.00.

7. There is also enclosed copy of letter addressed to the Blair-Murdock Company, under date of February 26th, 1916, bearing upon the subject and to which no definite reply has been received to date.

8. Copy of this communication has been furnished the Blair-Murdock Company.

9. Immediate reply is requested.

Colonel, Q. M. Corps,

The BLAIR-MURDOCK CO.,
68 Fremont St., City.

Following letter recd., in reply to above:

SAN FRANCISCO, CAL., Mar. 3, 1916.

DEAR SIR: Replying to your esteemed favor of February 28th, beg to advise that the National Surety Company elects to take over the Blair-Murdock contract and continue same to date of completion, viz, July 1st, 1916.

You will please send your orders for printing under said contract to H. M. Alexander, 45 Ecker St., and oblige,

Yours, truly,

NATIONAL SURETY COMPANY,
New York.

Original filed in the P. & M. Branch. No. 486.4. West. Dept.

CANADIAN AEROPLANES, LIMITED,
Toronto, Ont., July 5, 1917.

Colonel W. D. NOWBILL,
216 Pine St., San Francisco, U. S. A.

DEAR SIR: Your letter of June 24th just received. I do not understand not having received your letters of April 2nd and May 17th, spoken of in your communication, as mail should have been forwarded to me here.

I left the Blair-Murdock Co. in July, 1916, and have had nothing to do with the company since that time. I would suggest that you communicate with Charles A. Murdock, who was still interested in the company after I left.

I am very sorry that I can not be of more assistance to you in straightening out this matter, but as I lost heavily in that company I can not see my way clear to assume any more of the obligations outstanding against it.

Yours, very truly,

R. K. BLAIR.

WAR DEPARTMENT,
HEADQUARTERS WESTERN DEPARTMENT,
OFFICE OF THE DEPARTMENT QUARTERMASTER,
216 Pine Street, San Francisco, Cal., August 13, 1917.

From: Colonel Thomas G. Hanson, Q. M. Corps.

To: Quartermaster General of the Army.

Subject: Inclusion of \$181.26 in remedial legislation for relief of Colonel Thomas G. Hanson.

1. Inclosed herewith are two copies of correspondence relative to an overpayment to the Blair-Murdock Company of \$181.26, on voucher 102, my accounts for February, 1916, with request that they be submitted to the Secretary of War for inclusion in remedial legislation for my relief against the suspension by the auditor, which was confirmed in a decision of the comptroller April 9, 1917.

2. On June 14, 1915, the Blair-Murdock Company, a corporation existing under the laws of the State of California, entered into contract to furnish labor and material for the necessary printing for headquarters, Western Department, San Francisco, Cal., and on or before Feb. 28, 1916, the company failed before I had any knowledge of the suspension against me.

3. The inclosed are extract copies of the following correspondence:

A-1 to A-3. Appeal from disallowance by the auditor.

B-1 to B-4. Decision of the comptroller affirming the disallowance by the auditor
C. Letter to Ralph K. Blair, May 22, 1917, requesting refundment, to which no reply was received.

D-1 to D-2. Correspondence with the National Surety Company relative to failure of the Blair-Murdock Company, and taking over the contract for printing.

E. Final answer from Ralph K. Blair, stating that he can not refund \$39.25 overpaid the said corporation by Major Willard D. Newbill. Efforts to locate other members of the corporation resulted in failure.

THOS. G. HANSON,
Colonel, Q. M. Corps.

[First indorsement.]

WAR DEPT., Q.M.G.O.,
Aug. 20, 1917.

TO THE ADJUTANT GENERAL OF THE ARMY.

It is recommended that authority be granted to include in the estimate for support of the Army, fiscal year 1919, an item for the relief of Col. Thomas G. Hanson, Q. M. C., in within mentioned sum of \$181.26.

HENRY C. SHARPE,
Quartermaster General.

[Second indorsement.]

WAR DEPT., A. G. O.,
Aug. 22, 1917.

TO THE QUARTERMASTER GENERAL.

1. Approved as recommended in the 1st indorsement hereon.

By order of the Secretary of War:

T. O. MURPHY,
Adjutant General.

(Relief of Col. W. D. Newbill, \$39.25.)

FEB. 28, 1916.

From: Department quartermaster.

To: National Surety Company, No. 105 Montgomery Street, San Francisco, Calif.

Subject: Contract for printing—Blair-Murdock Co., F. Y. 1916.

1. In the matter of contract entered into by the Blair-Murdock Company, of San Francisco, California, with the United States Government (dated June 14, 1915), for furnishing necessary material and labor, etc., for printing, etc., required at headquarters, Western Department, during the fiscal year commencing July 1st, 1915, and ending June 30, 1916, you are advised, as surety under said contract, that said contractor is not now, nor for some days past, observing or performing the conditions of said

agreement, that "The contractor must be prepared to keep the office open and ready for work from 9.00 a. m. until 4.30 p. m., daily, Sundays and legal holidays excepted, to promptly comply, and to furnish proof and finish work without delay, so as not to retard public business."

2. Under the circumstances of the failure of the contractor to do work required under the contract and to comply with the stipulations of the contract according to the true intent and meaning thereof, notice is hereby given of the procedure authorized to be taken under conditions recited herein, i. e., "to supply the deficiency by purchase in open market, special contract, or in such other manner, as the contracting officer may elect, and the contractor shall be charged with the expense and additional cost, if any, resulting from such failure."

3. Definite advise is required as to whether the National Surety Company, as surety as aforesaid, elects to take over the Blair-Murdock Company's contract and continue the same to date of completion. In the event the National Surety Company elects to take over the said contract, the Department Quartermaster should be informed of the agency through which the printing shall be accomplished.

4. Notice is given that printing required at headquarters, Western Department, is being purchased in the open market pending reply to this letter of notification of the failure of the Contractor, the Blair-Murdock Company, to perform work under its contract.

5. Copy of contract referred to herein, is enclosed for your information, special reference being had to paragraphs 3 and 17 thereof.

6. For your further information, it may be remarked that the bond as executed by the National Surety Company, to cover the said contract, is of date June 14, 1915, in amount of \$1,000.

7. There is also enclosed copy of letter addressed to the Blair-Murdock Company, under date of February 26, 1916, bearing upon the subject, and to which no definite reply has been received to date.

8. Copy of this communication has been furnished the Blair-Murdock Company.

9. Immediate reply is requested.

Colonel, Q. M. Corps.

The BLAIR-MURDOCK Co.,
68 Fremont Street, City:

Following letter received in reply to above:

SAN FRANCISCO, CAL., March 3, 1916.

NATIONAL SURETY Co.,
New York.

DEAR SIR: Re Blair-Murdock Co.

Replying to your esteemed favor of February 28, beg to advise that the National Surety Co. elects to take over the Blair-Murdock contract and continue same to date of completion, viz, July 1, 1916.

You will please send your orders for printing under said contract to H. M. Alexander, 45 Ecker Street, and oblige

Yours, truly,

Original filed in P&M Branch No. 486.4 West Dept.

Appeal No. 26570.

MARCH 31, 1917.

Lieut. Col. W. D. Newbill, Quartermaster Corps, United States Army, applied December 19, 1916, for revision of the action of the Auditor for the War Department in disallowing, by settlement No. 39731, dated November 18, 1916, credit in part for certain payments, hereinafter more specifically explained, made to the Blair-Murdock Co. of San Francisco, Cal., for printing under that company's contract of June 14, 1916, the amount of the disallowance being \$13.

With respect to the items here involved the auditor in his disallowance states:

October, 1915.

Vou. 171: Disallowed in part Nov. 18, 1916: S.S.&T/1916..... \$2.00

PAYMENT FOR JOB PRINTING.

No. 27, 1,500 copies of Bulletins No. 52, 12 tokens, for which \$3 are charged for instead of 6 tokens, or \$1.50, the correct amount, making an overpayment

Two pages of this job could be printed at one impression.

No. 151, 300 copies G. C. M. O. No. 389, 4 tokens are charged and paid for instead of 2 tokens, the correct amount, or 50 cents, making an overpayment of 50

cents, 1915.

Disallowed in part Nov. 18, 1916. S. S. & T/1916..... \$1.75

PAYMENT FOR JOB PRINTING.

No. 65, 1,750 copies G. O. No. 16, 224 tokens, at 25 cents, or \$56, are charged for instead of 217 tokens or \$54.25, the correct amount, making an overpayment of \$1.75.

Further examination of the above item discloses the fact that it should have been printed in 112 tokens and that suspension should have been made in the sum of \$1.75. The item consists of 32 pages of 8 by 10 inches, and two of these pages should have been printed on one side at the same time, as the contractor has 12 by 18 inches. These two pages should then have been printed on the reverse at the same time. In this manner 250 copies of the entire job (32 pages) could have been printed in 16 tokens and 1,750 copies in 112 tokens. In view of the fact that the original suspension was made in the sum of \$1.75 this office can disallow any sum in excess of said amount. However, the printer has been repaid in the sum of \$28 and the full amount thereof should be refunded. If action is not taken it will be necessary for this office to have settlement No. 100 opened by the Comptroller in order that the further sum of \$26.25 may be refunded.

Disallowed in part Nov. 18, 1916. S. S. & T/1916..... \$9.25

This voucher covers payment in favor of the Blair-Murdock Co. for printing during the month of December. Item 1. Special Orders No. 262. Payment for presswork has been made on the basis of 10 tokens. This figure has been arrived at by the contractor 4 tokens for 300 copies of the completed special order, whereas 6 tokens should have been allowed for the 300 copies. Overpayment on this item amounts to \$0.50. A similar overpayment has been made on items 3, 4, 8, 10, 16, 17, 18, 20, 21, 23, 24, and 26.

16—G. O. No. 29.—Payment for presswork on this item should have been made on the basis of 6 tokens instead of 12.

18—List of supplies.—As the contractor has been paid for double-price composition, the rules should have been set in the form, thus obviating the necessity of setting this item through the press twice. Total overpayment on this voucher for presswork, \$9.25.

The decision in this case depends upon the determination of the proper method of computing impressions for work performed under the contract; and, with respect to this question, the contract provides in article 9, as follows:

Presswork.—A token consists of 250 impressions, and where the press on hand is large enough to print with one impression two or more pages of the job or book form, the allowances for presswork will be in accordance therewith, viz: One impression for each copy of a job, etc., regardless of the number of pages that can be properly printed at one time on the largest press named in the contract, printed and cut to the purpose required."

It can be seen from the article quoted that the unit of measure with respect to presswork therein provided was the token, which was to consist of 250 impressions. In connection with the computation of impressions, in view of the provisions of this contract to the effect that, where the press on hand is large enough to print, with one impression, two or more pages of a job, etc., the allowance for presswork would be in accordance therewith; that is, on the basis of one impression and of the fact that, under article 2 of the contract, the contractor is expressly required to have one press, measuring at least 12 by 18 inches, it would appear that, in computing the number of impressions, the basis was to be the greatest number of pages of a job that properly could be printed at one impression on the presses at hand, the nature of each job being taken into consideration, without regard to what press and actually been used or the number of impressions that had actually been made.

In other words, under the provisions of this contract the contractor, in printing the jobs, was to be paid on the basis of the least number of impressions that might have been made had the work been done in a "workmanlike" manner as provided in article 1 of the contract.

In this connection it is noted that in article 2 of the contract it is stated that the presses which would be furnished by the contractor were as follows: Eight by 12 inches Gordon, 10 by 15 inches Gordon, 10 by 15 inches Gordon, 12 by 18 inches Gordon.

The items of the disallowance will now be considered in order.

Voucher No. 171, October, 1915; item 27, Bulletin No. 52.—The job involved in this item was a single sheet printed on both sides. The page size of the job was such that 2 pages might easily have been printed at one impression on the presses at hand, the paper being turned after the initial impression of each copy. But 1,500 impressions would thus be necessary, which, under this contract, constituted 6 tokens, on which basis payment should have been made.

The action of the auditor as to this item is affirmed.

Voucher No. 171, October, 1915, item No. 51, General Court-Martial Order No. 389.—This job is of the same page size as the one involved in item 27, and is in all other respects similar thereto. For the same reasons stated with respect to item 27, the action of the auditor as to the item here involved is affirmed.

Voucher No. 235, December, 1915, item No. 65, General Order No. 16, Headquarters, Western Department.—This job is finished in pamphlet form and consists of 32 job pages. The size of the job page in this case is 8 by 10 inches, and accordingly it is apparent that two such pages might easily have been printed at one impression on the contractor's 12 by 18 inch Gordon press. Only 16 impressions would thus have been required for one copy of the entire job, or 28,000 impressions (112 tokens) for the 1,750 copies under the order. The action of the auditor in disallowing \$1.75 as to this item is affirmed and, since the entire overpayment amounted to \$28, an additional disallowance of \$26.25 is made on this revision.

Voucher No. 123, January, 1916, item 1, Special Order No. 262.—The facts in this case with respect to printing conditions are identical with those in item No. 27. For the same reasons stated with respect to that item, the action of the auditor as to the item here in question is affirmed.

Voucher No. 123, January, 1916, item 96, General Order No. 29.—The action of the auditor with respect to this item is affirmed, for the same reasons stated with respect to item No. 27.

Voucher No. 123, January, 1916, item No. 98, rules printed on page relative to list of supplies.—Here both the vertical and the horizontal rules should have been set in the form and printed at the same time. The action of the auditor is accordingly affirmed.

The total disallowance of \$13 made by the auditor is affirmed and, for reasons hereinbefore stated, upon his revision a certificate of difference in the sum of \$26.25, on account of additional disallowance, will issue.

Revision is limited to the items of which revision is requested, and the right of revision as to remainder of the account is reserved.

W. W. WARWICK, *Comptroller.*

DEPARTMENT QUARTERMASTER, WESTERN DEPARTMENT,
December 12, 1916.

COMPTROLLER OF THE TREASURY,
Washington, D. C.

Appeal from disallowance by auditor.

1. In difference sheet No. 7, certificate No. 39731, dated Nov. 21, 1916, the Auditor for the War Department has made disallowances in part of three vouchers—for October, and December, 1915, and January, 1916—and as I do not agree with the auditor's finding, as set forth in the difference sheet referred to, appeal from such disallowances is hereby made, as follows:

October, 1915.

Voucher 171. Disallowed in part, November 18, 1916: S. S. & T./1916: \$2.00.

PAYMENT FOR JOB PRINTING—ITEM 327.

1,500 copies of Bulletin No. 52, 12 tokens, for which \$3 are charged and paid for, instead of 6 tokens, or \$1.50, the correct amount, making an overpayment of \$1.50. Two pages of this job could be printed at one impression.

h 9 of the contract reads:

It consists of 250 impressions, and where the press on hand is large enough to print one impression two or more pages of the job or book form, the allowance will be in accordance therewith, viz: One impression only for each copy of the contract, regardless of the number of pages that can be properly placed at one time on the largest press named in the contract, printed and cut to suit the purpose of the contract.

of Bulletin No. 52 is attached herewith. The order for printing calls for 3,000 impressions, printed on both sides of a single sheet of paper, which I maintain entitled the contractor to an allowance of 3,000 impressions, or 12 tokens, the charge for which under the contract is \$3.00, and payment was made in accordance therewith.

Under No. 51, 300 copies G. C. M. O. No. 389, four tokens are charged and paid for, or 40 cents, instead of two tokens, the correct amount, or 50 cents, making an overpayment of 10 cents.

General Court-Martial Order No. 389 is attached. The same remarks apply to items 27 above.

November, 1915.

135: Disallowed in part November 18, 1916: S. S. & T/1916: \$1.75.

PAYMENT FOR JOB PRINTING.

Item 65, 1,750 copies G. O. No. 16, 224 tokens, at 25 cents, or \$56, are charged for instead of 217 tokens, or \$54.25, the correct amount, making an overpayment of \$1.75.

An examination of the above item discloses the fact that it should have been 112 tokens and that suspension should have been made in the sum of \$28.80. The item consists of 32 pages 8 by 10 inches, and two of these pages have been printed on one side at the same time, as the contractor has a press 12 by 18 inches. These two pages should, then, have been printed on the other side at the same time. In this manner 250 copies of the entire job (32 pages) should have been printed in 16 tokens and 1,750 copies in 112 tokens. In view of the fact that a partial suspension was made in the sum of \$1.75, this office can not now disallow a sum in excess of that amount. However, the printer has been overpaid a sum of \$28.80, and the full amount thereof should be refunded. If this action is taken, it will be necessary for this office to have settlement No. 37896 reopened by the comptroller in order that the further sum of \$26.25 may be disallowed.

Paragraph 2 of the contract reads:

Following are the names and sizes (inside of chase) of the presses which the contractor will furnish for the work, one press to be at least 12 by 18 inches, viz: 12 by 12, Gordon 10 by 15, Gordon 10 by 15, Gordon 12 by 18 inches."

of General Orders, No. 16 is attached. It consists of 32 pages 8 by 10 inches, as shown by the auditor, but I am at a loss to understand how two pages of this item can be printed at the same time on a press 12 by 18 inches. It is submitted that the proper allowance on this item is 32 pages printed on both sides, two copies each; 1,750 copies, 7 tokens; total, 224 tokens, at 25 cents each, \$56, as charged for.

January, 1916.

Item 123: Disallowed in part, November 18, 1916; S. S. & T/1916; \$9.25.

The voucher covers payment in favor of the Blair-Murdock Co., for printing during the month of December.

—*Special Orders, No. 262.*—Payment for presswork has been made on the basis of 4 tokens for each side of the completed special order, whereas only 2 tokens should have been allowed for 300 copies. Overpayment on this item amounts to 50 cents. A similar overpayment has been made on items 3, 4, 8, 10, 11, 13, 16, 17, 18, 20, 21, 23, 24 and 26. A copy of completed Special Orders, No. 262, is attached. It is maintained the contractor is entitled to a token for each side of this item, 2 tokens in all, and 2 tokens for each copy (1 token for each 250 copies or fraction thereof, or four tokens for the item, whichever is less). The payment made for this and all other items mentioned in this paragraph is correct under the contract.

Item 96—*G. No. 29.*—Payment for presswork on this item should have been made on the basis of 6 tokens instead of 12.

A copy of General Orders, No. 29, is attached. The auditor's finding is based on an allowance of one impression only for each copy of this item, while I maintain, as in all the above items, that the contractor is entitled to two impressions where a single copy is printed on both sides, and that the amount charged and paid for is properly allowed under the contract.

6. "*Item 98—List of supplies.*—As the contractor has been paid for double-price composition the rules should have been set in the form, thus obviating the necessity of running this item through the press twice. Total overpayment on this voucher account of presswork, \$9.25."

Copy of the list of supplies is attached. There are two kinds of rules in this item and it is impracticable to set horizontal and vertical rules at the same time; therefore, it was necessary to run the work through the press twice. This is the position taken in discussing the matter with the auditor, and in addition it was stated that it was believed the Government desired only a fair and reasonable return for the money expended. It is believed that any reputable printer will certify that the work performed on these press items gives the Government a fair and reasonable return and that the contractor is entitled to the prices charged and the allowances made in each item.

WILLARD N. NEWBILL,

Major, United States Army (Retired), Acting Quartermaster.

APRIL 2, 1917.

MR. RALPH K. BLAIR,

Care of Curtiss Aeroplane Company, Buffalo, N. Y.

Disallowance by comptroller.

1. In connection with the contract entered into by the Blair-Murdock Co. with the United States for printing, covering the period July 1, 1915, to June 30, 1916, you are advised that the Comptroller of the Treasury has disallowed certain payments made by me to the Blair-Murdock Co. for items of printing during the months of October and December, 1915, and January, 1916, amounting to \$39.25.

2. This disallowance is due to a misinterpretation by me of the provisions of the contract, section 9, which reads:

"A token consists of 250 impressions, and where the press on hand is large enough to print with one impression two or more pages of the job or book form, the allowance for presswork will be in accordance therewith, viz: One impression only for each copy of a job, etc., regardless of the number of pages that can be properly placed at one time on the largest press named in the contract, printed and cut to suit the purposes required."

3. The disallowance of the comptroller is final, and unless the amount is restored to the United States by the contractor it will be necessary for me to do so from personal funds.

4. It is therefore requested that the Blair-Murdock Co., or its successors or assigns, assume this obligation, and in order to close the account send me a draft for the amount involved, \$39.25, for deposit with the Treasurer of the United States to my official credit.

W. D. NEWBILL,

By H. H. SARGENT,

Major, United States Army (Retired), Acting Quartermaster.

MAY 7, 1917.

[Lieut. Colonel W. D. Newbill, Q. M. Corps.]

MR. RALPH K. BLAIR,

c/o Curtis Aeroplane Company, Buffalo, N. Y.

Disallowance by comptroller.

1. Inclosed herewith is a copy of a letter written you under date of April 2, 1917, covering disallowance by the comptroller in my accounts of \$39.25, due to overpayment made you for printing.

2. To date I have received no reply to that letter, and for the purpose of settling my accounts a prompt refundment by you of the amount in question would be greatly appreciated.

W. D. NEWBILL,

By _____,

Major, United States Army (Retired), Acting Quartermaster.

JUNE 24, 1917.

K. BLAIR,
Highland Ave., Buffalo, N. Y.

re refundment.

April 2, 1917, and again on May 7, 1917 a letter was written you c/o Curtis Co., Buffalo, N. Y., requesting that you refund to me the sum of \$39.25 by the Comptroller of the Treasury in my accounts for the period July 1, 1916 to July 30, 1916.

The question was an overpayment made by me to the firm of Blair-Murdock during the fiscal year 1916. Every effort was made to have the disallowance removed, without success, as the comptroller made a clear case of overpayment, and the amount in question should therefore be repaid to the United States. As stated above, two letters have already been written on this subject, and up to date I have not received a reply to either.

There is a possibility of these letters having gone astray in the mails I take this opportunity to again request that the amount disallowed be repaid to me in the form of a post office money order made out in favor of the Department Quartermaster, Western Department.

Any action in this matter by you would be deeply appreciated for the reason that if no refundment is made soon the amount disallowed will be stopped against me and as the same was paid by me in good faith to the company of which you are a member it only appears just that you should bear the responsibility for the same. That it should not be paid out of my personal salary.

I am, Sir, truly,

By W. D. NEWBILL,
H. H. SARGEANT,
Major U. S. Army, Retired, Acting Quartermaster.

CANADIAN AEROPLANES, LIMITED,
Toronto, Ontario, July 5, 1917.

W. D. NEWBILL,
216 Pine Street, San Francisco, United States America.

SIR: Your letter of June 24, just received. I do not understand, not having received your letters of April 2 and May 17, spoken of in your communication, as mail has not yet been forwarded to me here.

I was not connected with the Blair-Murdock Co. in July, 1916, and have had nothing to do with the company since that time. I would suggest that you communicate with Charles A. Blair, who was still interested in the company after I left.

I am sorry that I can not be of more assistance to you in straightening out this matter, but as I lost heavily in that company I can not see my way clear to assume any of the obligations outstanding against it.

Yours, very truly,

R. K. BLAIR.

WAR DEPARTMENT,
HEADQUARTERS WESTERN DEPARTMENT,
OFFICE OF THE DEPARTMENT QUARTERMASTER,
216 Pine Street, San Francisco, Cal., August 6, 1917.

Department Quartermaster.

Quartermaster General of the Army.

Inclusion of \$39.25 in remedial legislation for relief of Willard D. Newbill.

Enclosed herewith are two copies of correspondence relative to the recovering of an overpayment to the Blair-Murdock Co., on voucher 171, October, 1915, for \$28; and voucher 123, January, 1916, \$9.25; with request that they be submitted to the Secretary of War for inclusion in remedial legislation for my relief against the suspension by the auditor in the sum of \$39.25.

On June 14, 1915, the Blair-Murdock Co., a corporation existing under the laws of the State of California, entered into a contract to furnish labor and material for the printing of forms for Headquarters, Western Department, San Francisco, Cal., and

on or before February 28, 1916, the company failed before I had any knowledge of the suspensions against me.

3. The inclosed copies of correspondence are as follows:

A-1 to A-3: Appeal from disallowance by auditor.

B-1 to B-7: Decision by the comptroller affirming the disallowance to the auditor.

C: Letter to Ralph K. Blair, May 2, 1917, inclosing copy of letter sent him April 2, 1917, marked "D."

E: Letter to Ralph K. Blair, June 24, 1917.

F: Final answer from Ralph K. Blair, stating that he can not refund the \$39.25 overpaid the said corporation.

G: Correspondence with the National Surety Co. relative to failure of the Blair-Murdock Co. and continuing furnishing the necessary printing under the terms of the contract.

WILLARD D. NEWBILL, *Colonel, Quartermaster Corps.*

[First indorsement.]

WAR DEPARTMENT,
OFFICE QUARTERMASTER GENERAL,
August 16, 1917.

TO THE ADJUTANT GENERAL OF THE ARMY:

1. These papers contain a request preferred by Col. Willard D. Newbill, Quartermaster Corps, department quartermaster, Western Department, for relief legislation in the sum of \$39.25 overpaid the Blair-Murdock Co. on printing done for the headquarters, Western Department, under contract.

2. As stated by Col. Newbill in inclosure E herewith, the Comptroller of the Treasury holds the payment to be a clear case of overpayment.

3. In view of the facts in the case information is requested whether it is desired relief legislation be asked in the case.

HENRY G. SHARPE, *Quartermaster General.*

[Second indorsement.]

WAR DEPARTMENT,
ADJUTANT GENERAL'S OFFICE,
August 18, 1917.

To the Quartermaster General, for specific recommendation as to whether or not in his opinion relief legislation should be requested of Congress.

By order of the Secretary of War.

EDW. CARPENTER, *Adjutant General.*

[Third indorsement.]

WAR DEPARTMENT,
QUARTERMASTER GENERAL'S OFFICE,
August 20, 1917.

TO THE ADJUTANT GENERAL OF THE ARMY:

It is recommended that authority be granted to include in the estimate for support of the Army, fiscal year 1919, an item for the relief of Col. Willard D. Newbill, Quartermaster Corps, in within mentioned sum of \$39.25.

HENRY G. SHARPE, *Quartermaster General.*

[Fourth indorsement.]

WAR DEPARTMENT,
ADJUTANT GENERAL'S OFFICE,
August 22, 1917.

To the Quartermaster General, approved as recommended in the preceding indorsement hereon.

By order of the Secretary of War.

EDWARD T. DONNELLY, *Adjutant General.*

OFFICE OF THE QUARTERMASTER,
COAST DEFENSES OF CRISTOBAL,
Fort De Lesseps, Canal Zone, September 15, 1917.

Capt. L. J. Emery, Quartermaster, United States Reserves.
Quartermaster General, United States Army, Washington, D. C.
Request for relief.

ere is inclosed herewith copy of proceedings of board of officers in the case of
ds for which I am accountable.

request that Congress be asked to grant me relief in the sum of \$139.

I have made the amount good and deposited the same to my official credit.

L. J. EMERY,
Captain Quartermaster, United States Reserves.

[First indorsement.]

WAR DEPARTMENT,
QUARTERMASTER GENERAL'S OFFICE,
October 1, 1917.

ADJUTANT GENERAL OF THE ARMY:

recommended that the authority of the Secretary of War be requested to
in an estimate from this office the within sum of \$139 for the relief of Capt.
Emery, Quartermaster, United States Reserves.

HENRY G. SHARPE, *Quartermaster General.*

[Second indorsement.]

Emery, L. J. (Offrs.).

WAR DEPARTMENT,
ADJUTANT GENERAL'S OFFICE,
October 3, 1917.

QUARTERMASTER GENERAL:

oved as recommended in the first indorsement hereon.
order of the Secretary of War.

JOSEPH F. JANDA, *Adjutant General.*

HEADQUARTERS PANAMA CANAL DEPARTMENT,
Ancon, Canal Zone, August 17, 1917.

3.05 (Dept. Q. M. C.).

Department Commander.

ie Adjutant General of the Army, Washington, D. C.

t: Loss of public funds.

nclosed herewith is one copy of report of board of officers convened at head-
rs, Coast Defenses of Cristobal, Fort De Lesseps, Canal Zone, August 7, 1917, per
aph 1, S. O. 130. This board was convened to investigate, report upon, and make
mendations regarding the loss of certain public funds for which Capt. Lewis J.
, Quartermaster Officers' Reserve Corps, is accountable. The proceedings of
ard are approved and it is recommended that the necessary steps be taken to
ngress to relieve Capt. Emery of his accountability for \$139, the total amount
him in transferring funds from the bank at Cristobal to Fort Sherman.

conditions at Pier 11, where the harbor boats are docked, are such that it is
ly dangerous to load freight, but is dangerous to persons in boarding harbor boats
dock there. At the present time no other place is available for these boats to
nd there will not be any other place until such time as a new dock is constructed
in connection with the Headquarters Canal Department of Cristobal. It would
from the proceedings of the board that Capt. Emery exercised due care on the
on of this accident and that the loss of the funds was not through any neglect on
rt.

A. G. CRONKHITE,
Brigadier General, Commanding.

[First indorsement.]

(Misc. Div.).

ADJUTANT GENERAL'S OFFICE,
August 31, 1917.

the Inspector General.

[Second indorsement.]

123.05—Emery, Capt. L. J. (QMORC).

WAR DEPARTMENT,
OFFICE INSPECTOR GENERAL,
September 11, 1917.

To The Adjutant General, concurring in the recommendation of the commanding general, Panama Canal Department, that the necessary steps be taken to ask Congress to relieve Capt. Emery of his accountability for \$139, the total amount lost by him in transferring funds from the bank at Cristobal to Fort Sherman.

J. L. CHAMBERLAIN, *Inspector General*.

[Third indorsement.]

123.05 (Misc. Div.).

WAR DEPARTMENT,
ADJUTANT GENERAL'S OFFICE,
October 5, 1917.

To the Judge Advocate General, for remark.

By order of the Secretary of War:

L. A. DEWEY, *Adjutant General*.

[Fourth indorsement.]

GDG/TAS—(AGO 123.05).

WAR DEPARTMENT,
JUDGE ADVOCATE GENERAL'S OFFICE,
October 17, 1917.

72-510.

TO THE ADJUTANT GENERAL:

1. In the matter of the report of the board of officers convened at headquarters, Coast Defenses of Cristobal, Fort de Lesseps, Canal Zone, August 7, 1917, per paragraph 1, Special Orders No. 130, referred to this department for remark, it appears from a review of the proceedings that the board fixed the responsibility for the loss on August 6, 1917, of certain Government funds for which Capt. Lewis J. Emery, Quartermaster Officers' Reserve Corps, was responsible.

2. In effect, the board considered certain affidavits and examined all available witnesses to the transaction. The investigation disclosed that on August 6, 1917, as coast defense quartermaster, Capt. Emery drew an official check for the payment of troops at Fort Sherman, Canal Zone; that the money was drawn from the bank, was placed in four bags and taken to dock 11 in quartermaster truck, from which it was proposed to transfer the money to the steamer *A. G. Forse*. The testimony disclosed that it was customary to call on "near-by enlisted men" to assist in such transfer. On the date in question it became necessary, in order to reach the boat, to pass through a box car the floor of which was about 5 feet above the guardrail of the dock to which the boat was anchored and that the guardrail of the boat was about 1 foot below the dock. Capt. Emery directed one Sergt. Brooks to assist in such transfer and to pass the bags from the car to a man on the dock; that Sergt. Brooks passed the sack which he had to Corpl. Squibbs and then jumped down and carried the sack onto the boat. Capt. Emery likewise instructed Corpl. Hennings, but Corpl. Hennings, however, disobeyed such instructions and jumped with the bag of money lying in the crook of his elbow; that when he landed on the deck the jolt of landing caused the bag to fall from his arms; and that, in so falling, the string and seal around the neck of the bag was loosened, causing about \$300 to be scattered over the boat, while the remainder of its contents fell overboard. It further appeared that the sack contained \$1,150; that there was recovered of this amount the following: Three hundred and twenty-two dollars from the deck of the boat; \$273 from the bag at the bottom of Limon Bay; and \$416 from the bottom of the bay by a diver from the U. S. S. *Tallahassee*. The difference, \$139, represents the amount which apparently fell into the water and was not recovered by the diver, who, it appears, worked for a period of two days at a depth of 30 feet in attempting to recover all money which had escaped from the bag when it fell overboard. The above and foregoing is substantially a digest of the evidence submitted to the board convened, as before stated, for the purpose of fixing the responsibility, if any, of Capt. Lewis J. Emery.

3. After closely examining and considering all of the testimony, including that of "the bank officials, and all the circumstances leading up to the loss of funds," as stated by the board, it was concluded that the loss of the \$139 was occasioned by an accident and through no fault or neglect of Capt. Emery, the responsible and account-

icer. The board expressly found and concluded "that all due care was used in handling and transporting this money." Then, by way of general conclusion, it recommended that Capt. Emery be relieved of the responsibility and liability for the loss of the said \$139.

It is the opinion of this office that the findings of the board are justified and that they should be considered as conclusive. And this office is of the further opinion that steps should be taken to have Congress relieve Capt. Emery from his accountability for the loss of the \$139, and to that end it is recommended that the following private bill be submitted to Congress:

An Act for the relief of Lewis J. Emery.

enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Treasury be, and he is hereby, authorized and directed to pay to Lewis J. Emery, captain, Quartermaster Officers' Reserve Corps, out of any moneys in the Treasury not otherwise appropriated, the sum of \$139, the amount of a certain sum of money which was accidentally lost at Cristobal, Canal Zone, on the sixth day of August, nineteen hundred and seventeen, in transmitting said money, which belonged to the United States of America, from the bank of Sherman, in said zone, which said money was in no way lost by, through, or as a result of the fault, neglect, or omission of the said Lewis J. Emery.

HERBERT A. WHITE,
Acting Judge Advocate General.

[Fifth Indorsement.]

WAR DEPARTMENT,
ADJUTANT GENERAL'S OFFICE,
October 27, 1917.

The Quartermaster General, approved as recommended by the Judge Advocate General in the preceding indorsement.
By order of the Secretary of War:

L. W. DEWEY, *Adjutant General.*

FINDINGS OF A BOARD OF OFFICERS WHICH MET AT CRISTOBAL, CANAL ZONE, PURSUANT TO THE FOLLOWING ORDER.

GENERAL ORDERS, } HEADQUARTERS COAST DEFENSES OF CRISTOBAL,
No. 130. } *Fort de Lesseps, Canal Zone, August 7, 1917.*

The board of officers to consist of—

Capt. Earl Biscoe, Coast Artillery Corps,
Capt. Wade H. Carpenter, Coast Artillery Corps, and
Capt. James W. Lyon, Coast Artillery Corps.

met at 1 p. m. this date to investigate and report upon and fix the responsibility for the loss on August 6, 1917, of certain Government funds for which Capt. J. Emery, quartermaster, Officer Reserve Corps, was responsible.

The proceedings will be submitted in quadruplicate.
By order of Col. Lamoreux.

T. A. TERRY,
Captain, Coast Artillery Corps, Adjutant.

CRISTOBAL, CANAL ZONE, *August 7, 1917.*

The board met pursuant to the foregoing order at 2 p. m. this date.

Present:

Capt. Earl Biscoe, Coast Artillery Corps.
Capt. Wade H. Carpenter, Coast Artillery Corps.
Capt. James W. Lyon, Coast Artillery Corps.

The board then proceeded with the investigation of the loss of Government funds on August 6, 1917.

The following witnesses were called before the board and closely examined. Affidavits of each attached herewith (certificate of Capt. Lewis J. Emery, quartermaster, Officer Reserve Corps, and Mr. Cecil F. Hicks).

Capt. Lewis J. Emery, quartermaster, Officers' Reserve Corps, A.
Sgt. 1st Class Bruno B. Brooks, Quartermaster Corps, B.
Sgt. Jesse W. Anderson, Quartermaster Corps, C.

Corpl. Walter A. Hennings, Coast Artillery Corps, Fifth Company, Fort Sherman, D.
Pvt. 1st Class Clarence M. Squibb, Coast Artillery Corps, Fifth Company, Fort Sherman, E.

Serzt. George L. Gault, Quartermaster Corps, F.

Pvt. 1st Class George E. Outlaw, Quartermaster Corps, G.

Pvt. Walter D. Higginbottom, Coast Artillery Corps, First Company, Fort Sherman, H.

Mr. Cecil F. Hicks, assistant cashier Commercial National Bank, I.

From all the testimony available, including the bank officials, the circumstances leading up to the loss of funds were as follows:

The money, \$23,560.44 in coin, to pay the troops at Fort Sherman was put up by the bank in four money bags and tied and sealed with the bank seal. A Government check to cover the amount was given the bank by Capt. Lewis J. Emery, quartermaster, Officers' Reserve Corps.

The four bags were loaded into the Quartermaster Corps truck by quartermaster employees, under the supervision of Capt. Lewis J. Emery, quartermaster, Officers' Reserve Corps, and Serzt. (First Class) Bruno B. Brooks, Quartermaster Corps (pay clerk), and proceed to Pier 11, Panama Railroad, Cristobal, Canal Zone. At Pier 11 the truck was unloaded and the four money bags were carried to an empty box car, the floor of which was on the main dock level, standing on the sea track next to the boat running to Fort Sherman. The floor of this car was about 5 feet above the guard rail of the dock to which the boats tie up. The guard rail of boat was about 1 foot below the dock.

One Corp. Walter A. Hennings, Fifth Company Coast Artillery Corps, Fort Sherman, Canal Zone, who was waiting for the boat to go to Sherman to be paid, was called upon by one Serzt. George L. Gault, Quartermaster Corps, to assist in carrying the money from the truck to the boat. It had been a long established custom to call on any soldier standing around to assist in handling the heavy sacks of money. Instructions had been given this day to hand the sacks of money from the box car to the guard rail of the dock and then to the boat. One sack of gold had thus been passed. Corp. Hennings who was carrying a sack containing 1,150 silver dollars in his arms, which sack weighed between 60 and 70 pounds, jumped with the sack in his arm from the floor of the box car to the wharf. His arms were not strong enough to hold the sack when he landed and the sack slipped through his arm and hit the rail of the boat in such a way that the heavy cord tied around the mouth of the sack and running through the lead seal was cut on the metal of the boat rail. The mouth of the sack opened and silver dollars were strewn over the boat deck and into the water. The bag itself went overboard with some money in it.

A diver from the U. S. S. *Tallahassee* was put to work immediately and worked for two days recovering money from the soft mud at the foot of the pier piles. The bag itself was recovered with about 200 silver dollars intact. The bag was undamaged and all of the loose money was lost out of the mouth of the bag.

The bottom where the money fell is very soft and muddy, making it extremely difficult to recover the loose silver dollars (the water was about 30 feet deep).

The following money was recovered:

From boat deck.....	\$322
From bag at the bottom.....	273
From the bottom.....	416
Total.....	1,011

The board is of the opinion that the loss of \$139 was occasioned by an accident and through no fault or neglect of the responsible and accountable officer, Capt. Lewis J. Emery, quartermaster, Officers' Reserve Corps. That all due care was used in the handling and transporting this money.

The board recommends that the responsible and accountable officer, Lewis J. Emery, quartermaster, Officers' Reserve Corps, be relieved of the responsibility and accountability of the loss of one hundred and thirty-nine dollars (\$139).

There being no further business before it, the board adjourned sine die.

E. BISCOE,
Captain, Coast Artillery Corps, President.

J. W. LYON,
Captain, Coast Artillery Corps, Recorder.

W. H. CARPENTER,
Captain, Coast Artillery Corps, Member.

AUGUST 11, 1917.

Approved.

T. N. LEMOREUX.

A.

FORT DE LESSEPS, CANAL ZONE, August 10, 1917.

pt. L. J. Emery, quartermaster, United States Reserves, certify that the g facts are correct to the best of my knowledge and belief:

August 6, 1917, as coast defense quartermaster, I drew an official check for pay-troops at Fort Sherman, Canal Zone. The money was drawn from the bank bags and taken to Dock 11, in Quartermaster Corps truck; there Sergt. First Brooks (pay clerk) and Pvt. Outlaw started to carry the money from truck to [he sacks were very heavy (payment being made in gold and silver), and Gault, Quartermaster Corps, and Corpl. Henninges, Coast Artillery Corps, Company, Fort Sherman, assisted in carrying the bags.

It was necessary to pass through a box car down to the dock and then to the boat, master tug *Major Albert G. Forse*. When in the box car I directed that the money be passed down from car to dock. Sergt. Brooks passed the sack he had to Corpl. Outlaw on the dock then jumped down and carried the sack on the boat; Corpl. Henninges was next, and as he stepped to car door I called to him to pass the bag down, of which he jumped, the sack slipped from his arms, struck the the guard boat, which cut the seal, and the contents spilled partilaly on the boat and y in the water. I had the money on the boat gathered up, and went immediately to the telephone and arranged with Commander Gross, United States Navy, to send a diver from the *Tallahassee* to hunt for the money.

The sack which dropped contained \$1,150; the same afternoon, August 6, \$658 was recovered, August 7, \$119, August 8, \$223, and August 9, \$11, leaving a loss of \$139. The water where the money dropped was about 30 feet deep and a thick, muddy bottom, making recovery very difficult.

L. J. EMERY,
Captain, Quartermaster, United States Regulars.

B.

AT FORT DE LESSEPS, Canal Zone, ss:

Personally appeared before me the undersigned authority, one, Sergt. First Class W. Brooks, Quartermaster Corps, who being duly sworn according to law and says:

August 6, 1917, when the automobile arrived at the Pier 11, at about 1.45 p. m. I had two bags of money, the pay rolls for Fort Sherman, Canal Zone, and my slicker strapped for the boat. I had gone a few yards when Sergt. George L. Gault, Quartermaster Corps, came and offered to help, due to the fact that the bags were getting heavy, and I was on the verge of putting them down. As it has been a custom ever since I have been here, December 16, 1916, to call on nearby enlisted men to help carry the money, due to its weight, I gave one of the bags to Sergt. Gault. I was then to go on board the steamer *A. G. Forse*. In getting on this boat it was necessary to go from the platform of the dock, through a box car, then to the string piece, and then to the boat. When I got through the box car I passed my bag of money to First Class Clarence M. Squibb, First Company, Fort Sherman, Canal Zone, who was sitting on the stringpiece, picked up the bag of money, and went on board the steamer *Forse*. When I got on board the steamer I heard Capt. Emery tell Corpl. Walter Henninges, Fifth Company, Coast Artillery Corps, Fort Sherman, Canal Zone, to give the bag to the man on the dock. Instead of this the corporal jumped with the money lying in the crook of his elbow. When he landed on the deck the jolt of the landing caused the bag of maney to fall out of his arms. When it fell it hit the upper rim of the steamer; the force of the blow caused the string and seal, put on the bank, to come off, and about \$300 scattered on the boat, the remainder fell overboard. In falling overboard the open end of the bag was turned towards the mouth of the bay and beyond a doubt a large amount of its contents left the bag and scattered over the bottom of Limon Bay.

BRUNO W. BROOKS,
Sergeant, First Class, Quartermaster Corps.

Witness my hand and subscribed before me this 8th day of August, 1917.

T. A. TERRY,
Captain, Coast Artillery Corps, Adjutant.

C.

POST OF FORT DE LESSEPS,
Canal Zone, ss:

Personally appeared before me, the undersigned authority, one Sergt. J. W. Anderson, Quartermaster Corps, who, being duly sworn according to law, deposes and says:

That on August 6, 1917, about 1 p. m., while assisting Capt. Emery to get aboard the steamer *Forse* with the money to pay the troops at Fort Sherman, Corporal Hennings, Fifth Company Coast Artillery Corps, Fort Sherman, Canal Zone, was carrying a bag containing silver dollars and when he jumped from car to dock, dropped the bag so that it fell, striking the guard-rail of boat, bursting open. The bag and part of the loose money fell overboard and about \$300 fell on to the deck of boat.

This at Cristobal, Canal Zone, about 1 p. m., August 6, 1917.

Further deponent saith not.

JESSE W. ANDERSON,
Sergeant, Quartermaster Corps.

Sworn to and subscribed before me this 10th day of August, 1917.

T. A. TERRY,
Captain, Coast Artillery Corps, Adjutant.

D.

POST OF FORT DE LESSEPS,
Canal Zone, ss:

Personally appeared before me, the undersigned authority, one Walter A. Hennings, corporal, Fifth Company Coast Artillery Corps, Fort Sherman, Canal Zone, who, being duly sworn according to law, deposes and says:

That while standing on pier 11, waiting for the steamer *Albert G. Forse* to dock, I was called by one Sergt. George L. Gault, Quartermaster Corps, to carry a bag of money to the boat. I complied with his request and with a bag of money started from the platform of the dock on to a box car, which was the shortest and quickest way to get to the boat. After reaching the car there was a step of about four feet down to the railroad track level, to which I jumped, with the bag of money in my arms; the weight of the bag of money, plus the height of jump, overbalanced me and I dropped the bag of money, which hit the scupper of the steamer *Major Albert G. Forse* and broke the string which secured the top of the bag; some of the money falling on the deck of the steamer *Forse* and the bag with the balance of the money fell into the water.

This at Cristobal, Canal Zone, about 1 p. m., August 6, 1917.

WALTER A. HENNINGS,
Corporal, Fifth Company, Coast Artillery Corps,
Fort Sherman, Canal Zone.

Sworn to and subscribed before me this 8th day of August, 1917.

T. A. TERRY,
Captain, Coast Artillery Corps, Adjutant.

E.

POST OF FORT DE LESSEPS, } ss:
Canal Zone.

Personally appeared before me, the undersigned authority, one Pvt. First Class Clarence M. Squibb, Fifth Company, Coast Artillery Corps, Fort Sherman, Canal Zone, who, being duly sworn according to law, deposes and says:

I was standing in the box car on Dock 11, Cristobal, Canal Zone, when the steamer *Major Albert G. Forse* was coming up to the dock. I heard a remark some one said, "Some one should get down on the dock and get the money." I then jumped off the car to the dock and I received a bag of money from Sergt. First Class Bruno B. Brooks, Quartermaster Corps, and I placed it on the dock. I then saw the bag of money which Corp. Hennings, Fifth Company, Coast Artillery Corps, Fort Sherman, Canal Zone, had hit the guardrail of the steamer *Albert G. Forse*, the bag having

open; as it fell on the guardrail of the boat it fell into the water with part of
 ey and a part of the money fell on the deck of the boat.

at Fort Sherman, Canal Zone, about 1 p. m., August 6, 1917.

er deponent saith not.

CLARENCE M. SQUIBB,
Private, First Class, First Company, Coast Artillery Corps.
Fort Sherman, Canal Zone.

to and subscribed before me this 7th day of August, 1917.

T. A. TERRY,
Captain, Coast Artillery Corps, Adjutant.

F.

OF FORT DE LESSEPS,
Canal Zone. } ss:

nally appeared before me, the undersigned authority, one Sergt. George L.
 Quartermaster Corps, who, being duly sworn according to law, deposes and says:
 e delivering some quartermaster supplies to Dock 11 with United States motor
 I observed the paymaster's clerk and Pvt. Outlaw carrying four bags of money
 o the dock; they were very heavy, and I relieved Sergt. Brooks of one of the
 id started down the dock with it. The two bags that Pvt. Outlaw had were
 heavier than the one I was carrying and I also took one from him. I pro-
 to the boat that was docked alongside the pier, and there was a box car between
 it and the upper part of the dock, and the only way to get to the boat was by
 hrough the car. As the two bags I was carrying became so heavy that I could
 er carry both, I asked Corp. Hennings to carry one into the car for me, which

getting the money into the car Sergt. Brooks got down into the boat to receive
 ney. Corp. Hennings took the bag he had carried into the car in his arms,
 n supporting the other, and jumped from the car to the dock, and as he struck
 r the force of the jump plus the weight of the money was so great that it forced
 as open and the bag slipped out of his hands, striking the dock slightly, and
 e guardrail of the boat, where the string broke, scattering the money over the
 id in the water, and the bag rolled overboard.

at Cristobal, Canal Zone, about 1 p. m., August 6, 1917.

her deponent saith not.

GEORGE L. GAULT,
Sergeant, Quartermaster Corps.

rn to and subscribed before me this 8th day of August, 1917.

T. A. TERRY,
Captain, Coast Artillery Corps, Adjutant.

G.

OF FORT DE LESSEPS,
Canal Zone, ss:

sonally appeared before me, the undersigned authority, one Private First Class
 ge E. Outlaw, Quartermaster Corps, who, being duly sworn according to law,
 es and says:

rove the automobile from the Commercial National Bank, Cristobal Branch,
 bal, Canal Zone, to Pier No. 11. I helped the quartermaster, Capt. L. J. Emery,
 ermaster, United States Reserves, and his clerk, Sergt. First Class Bruno W.
 es, Quartermaster Corps, carry the money to the boat going to Fort Sherman,
 l Zone. I took two bags of money and started for the boat. These bags became
 heavy after a few moments and Sergt. L. Gault, Quartermaster Corps, relieved me
 e of the bags. I did not see the bags drop.

ien Capt. G. Bartlett, Coast Artillery Corps, was acting quartermaster of coast
 es of Cristobal it was a custom to have the enlisted men in the vicinity of the
 help load the money on the boat.

is at Cristobal, Canal Zone, about 1 p. m., August 6, 1917.

urther deponent saith not.

GEORGE E. OUTLAW,
Private First Class, Quartermaster Corps.

vorn to and subscribed before me this 10th day of August, 1917.

T. A. TERRY,
Captain, Coast Artillery Corps, Adjutant.

H.

POST OF FORT DE LESSEPS,
Canal Zone, ss:

Personally appeared before me, the undersigned authority, one Pvt. Walfred D. Higginbotham, First Company, Coast Artillery Corps, Fort Sherman, Canal Zone, who, being duly sworn according to law, deposes and says:
That I saw Corp. Hennings, Fifth Company, Coast Artillery Corps, Fort Sherman, Canal Zone, jump from the box car on to the dock with a bag of money in his arms. I saw the bag of money fall from Corpl. Hennings's arms on to the guard rail of the steamer *Major Albert G. Forse*, then part of the money fell on to the deck of the steamer *Forse* and the other part fell into the water.
This at Cristobal, Canal Zone, about 1 p. m., August 6, 1917.
Further deponent saith not.

WALFRED D. HIGGINBOTHAM,
Private, Coast Artillery Corps, First Company, Coast Artillery Corps,
Fort Sherman, Canal Zone.

Sworn to and subscribed before me this 7th day of August, 1917.
T. A. TERRY,
Captain, Coast Artillery Corps, Adjutant.

I.

This is to certify that on August 6, 1917, I put up the pay roll for Fort Sherman, for Capt. L. J. Emery, Quartermaster, United States Reserve. This money, in coins, was in four money sacks, securely tied with strong cord and sealed with the bank seal. One of these sacks contained 1,150 silver dollars.
C. F. HICKS, Jr.,
Assistant Cashier Commercial National Bank,
Cristobal Branch.

CRISTOBAL, CANAL ZONE, August 8, 1917.

JULY 30, 1917.

153-National Rifle Match.
Spencer, Sam.
Memorandum for Capt. Daly:

Appropriations for payment of loss of and damage to property incident to the training, practice, and operations of the Army would be applicable to loss of live stock from target practice, if the injuries be accidental. But in this case it is held by the Judge Advocate General, whose view is concurred in by the Assistant Secretary of War, that the injuries resulted from the tort of the officer in charge and that he, and not the Government, is personally liable for the damages. I know no existing law which will authorize payment of the claim from public funds; to make such a payment would be an assumption by the Government of the personal liability of one of its officers—which is beyond the scope of executive authority. The question of relief of Maj. Harlee is one for consideration by Congress.

I. N. T.

FORT NIAGARA, N. Y., June 13, 1917.

From: Capt. A. F. Commiskey, Cavalry, Detached Officers' List, surveying officer, National Matches, 1916.
To: Col. S. W. Miller, executive officer national matches, 1916.
Subject: Report of cattle killed and wounded at the national matches.

1. In compliance with special order No. 14, headquarters national matches (copy of order attached hereto), dated November 22, 1916, Washington, D. C., I submit the following:
On October 9, 1916, five cattle were killed and three cattle wounded on the rifle range at State camp, Fla., by rifle fire during the shooting at the national matches, 1916.

The cattle were as follows:

1 brindle steer, 2 years old, value.....	\$20.00
1 brown milch cow, 5 years old, value.....	40.00
1 yellow-pied milch cow, 4 years old, value.....	40.00
1 yellow-pied milch cow, 6 years old, value.....	40.00
1 dun-pied steer, 3 years old, value.....	30.00

cattle wounded were as follows:

Red-pied steer, 3 years old, damage.....	\$10.00
Brown-pied steer, 4 years old, damage.....	10.00
Red-pied white milch cow, 3 years old, damage.....	10.00

These cattle were the property of Mr. Sam Spencer, Route B, Jacksonville, Fla. This claim is made in two letters from the owner of the cattle for damages (see letters "Exhibits A" and "B," attached hereto).

The cattle were on the range which was fenced in, government property, and taken by the officer in charge of the range, Maj. William C. Harllee, United States Marine Corps, assistant executive officer national matches.

When Maj. Harllee's attention was called to the fact that the cattle were on the range, considering the loss of time and therefore expense to the Government which would be caused by the suspension of the firing, decided to continue the firing, thus causing the killing and wounding of the cattle.

It is of the opinion that his decision was justified by the fact and circumstances. (See Maj. Harllee's statement marked "Exhibit C" attached hereto.)

The owner of the cattle was aware of the fact that firing was going on at the range. This cattle has been driven off and he had not prevented their return to the range.

It is of the opinion that in this he partially contributed to the cause of the killing of the cattle. (See statement of Charles Slater, quartermaster sergeant, first class, United States Guard, Florida, marked "Exhibit D," attached hereto.)

The law now enforced in Duval County, Fla., where the range is situated, seems to allow cattle to go at large and does not require them to be within fences on the owner's land. See letters from United States district attorney, southern district, Florida, marked "Exhibit E," attached hereto.)

Considering all the evidence I have been able to obtain, I am of the opinion that the damages claimed are caused by the rifle firing on the range; that it was not reasonable for Maj. Harllee to stop the firing and drive the cattle off, and that the loss of the cattle, Mr. Sam Spencer, was not entirely at fault for having his cattle on the range.

I therefore recommend that he be allowed damages as follows: Twenty-five dollars for each animal killed and \$10 for each animal wounded; \$155 in all.

The reason for allowing \$25 for each animal killed is that this was Mr. Spencer's estimate as to the value of the cattle. (See letter from Mr. Sam Spencer, dated June 18, 1916, Jacksonville, Fla., marked "Exhibit A," attached hereto.)

I received the last letter from Mr. Sam Spencer at Fort Niagara, N. Y., on the 14th day of May, 1917. I wrote him as required by paragraph 3, Circular 22, War Department, Washington, D. C., dated April 18, 1910. (Letter marked "Exhibit F," attached hereto.)

A copy accepting the findings of this report was received at Fort Niagara, N. Y., on the 14th day of June, 1917. (Letter dated June 12, 1917, marked "Exhibit G," attached hereto.)

ARCHIBALD F. COMMISKEY,
*Captain of Cavalry, Detached Officers' List,
Surveying Officer.*

IT.

FORT NIAGARA, N. Y., June 15, 1917.

ed.

S. W. MILLER,
*Colonel Infantry,
Executive Officer, National Matches for 1916.*

[First indorsement.]

Spencer, Sam.

HEADQUARTERS EASTERN DEPARTMENT,
June 20, 1917.

The Adjutant General of the Army, Washington, D. C., recommending approval of this claim is the one referred to in second and fourth indorsements, your office, No. 100, dated May 15 and 21, 1917, respectively.

E. E. BOOTH,
Major General, Commanding.

[Second indorsement.]

B.

ADJUTANT GENERAL'S OFFICE, June 29, 1917.

The Quartermaster General, in connection with previous papers on this subject (No. 1), sent to him on June 2, 1917.

[Third indorsement.]

150-A-E.

WAR DEPARTMENT,
OFFICE QUARTERMASTER GENERAL, *July 2, 1917.*

To THE ADJUTANT GENERAL OF THE ARMY.

1. Returned, recommending reference to The Judge Advocate General concerning the liability of the Government for the killing of the animals while trespassing on Government land, and for those injured but not killed and which were in possession of the owner according to the latest knowledge.

HENRY G. SHARPE,
Quartermaster General.

[Fourth indorsement.]

153 National Match Range, Fla.

WAR DEPARTMENT,
ADJUTANT GENERAL'S OFFICE,
July 19, 1917.

To the Judge Advocate General, for expression of opinion as to the legal points involved herein.

By order of the Secretary of War:

EDWARD T. DONNELLY,
Adjutant General.

[Fifth indorsement.]

WAR DEPARTMENT,
JUDGE ADVOCATE GENERAL'S OFFICE,
July 16, 1917.

To THE ADJUTANT GENERAL:

1. Mr. Sam Spencer, rural route B, Jacksonville, Fla., presents a claim for \$155 as damages for 5 head of cattle killed and 3 injured on the Black Point Rifle Range, Fla., October 9, 1916, being \$25 for each animal killed, and \$10 each for those wounded. The cattle strayed onto the rifle range during the national matches there; came within range of the rifles during practice; and were struck by bullets from the rifles during the practice. Under the local law it was permissible for the animals to run at large, and, although it appears they had been driven off the rifle range the previous day, they had again strayed onto the range through a gate that had been left open by some one. The officer in charge of the practice at the time was advised of the presence of the animals on the range and of their proximity to danger from the rifle firing, but he considered that he would not be justified in discontinuing the rifle practice long enough to remove the animals. His statement is as follows:

"When it was reported to me, during the middle of the forenoon, that several cattle were behind the butts, I did not deem the loss of the cattle commensurate with the loss of time necessary to stop work and drive off the cattle. One hundred and fifty targets, used by about 50 teams of about 1,000 shooters from all parts of the country, as far west as California and Alaska and served by about 600 officers and men, were in operation, and to drive off the cattle it would have been necessary to suspend plans, all this, and moreover, to disjoin a program upon which all plans were made and dates set for future movements. I therefore considered that it would be more advisable to continue the firing and risk shooting the cattle, and gave directions accordingly."

2. In view of the circumstances mentioned, the case is referred to this office for an opinion as to the legal points involved, the Quartermaster General suggesting the question as to "the liability of the Government for the killing of the animals while trespassing on Government land, and for those injured but not killed and which were in possession of the owner according to the latest knowledge."

3. It appears quite plain from the facts stated that the claimant is legally entitled to recover the amount of damages sustained by him in the killing and injuring of his cattle. The law on this point is thus stated in Bigelow on Torts:

"A word may be added in regard to trespassing animals. The law is very plain and natural; trespassing will seldom justify killing or maiming, or even detaining upon a claim for anything more than reimbursement of necessary expenses and payment of damage done. And if detained, the animals must be taken care of and properly treated. On the other hand, if driven away, that must be done without unnecessary violence; such violence would be trespass. For example, the defendant finding the plaintiff's horse straying upon his premises, sets a dog upon it, and the horse is seriously hurt. The defendant is liable in damages."

4. There is, of course, the question of liability of the owner of the cattle for their trespassing upon the Government reservation. This is governed by the local laws.

bove, it was lawful for the cattle to run at large, since the locality has the
ence law. Section 1223, Florida Compiled Statutes, set forth the require-
the character and construction of fences as inclosures against cattle running
d section 1234 provides:

trespass or damage be committed on any garden, orchard, plantation, or
, not being fenced or inclosed as above provided, by the eruption, break ing
ing of any cattle, horse, sheep, goat, or swine, the owner of the same shall
le to answer for such trespass, or to make good or satisfy any damage or
t shall happen or be committed by reason thereof: and in case any person
main, hurt, or destroy, or cause to be killed, maimed, hurt, or destroyed
animal so trespassing or breaking into any garden, orchard, plantaticn, or
not fenced or inclosed in manner as by this chapter is directed, such person
er and make good to the owner thereof all such injuries and damages he shall
ereby: the same to be recovered before any court having jurisdiction of

ch as it appears in this case that the cattle strayed upon a rifle range through
te without claimant's fault it would seem clear in view of the statute quoted
uld not be held liable for any damage that may have been caused by the

It would seem equally clear that the claimant is entitled to recover for
ges sustained by him on account of the shooting of his cattle. But as the
of the animals under the circumstances was a tort the officer responsible is
lly liable. His duty in directing the rifle matches did not legally require
ceed with the firing in disregard of the presence of the cattle when he knew
e within rifle range, as would have been the case had he been directing
litary operations in war. It is well settled that the United States is not
ble for the torts of its officers or agents, but they alone are legally responsible
orts. Digest of Opinions, J. A. G., page 242 and note 4.

le technically the officer directing the rifle matches at the time is regarded
liable for the damages claimed in this case, the explanation which he mal es
obably justify the department in recommending to Congress that the
tates assume the obligation and that Congress appropriate the necessary
the settlement of the claim. I recommend that this be done. The
claimed appears to be reasonable.

BLANTON WINSHIP,
Acting Judge Advocate General.

red:

WM. M. INGRAHAM,
Assistant Secretary of War.

[Sixth Indorsement.]

l Match Range, Fla.

WAR DEPARTMENT,
ADJUTANT GENERAL'S OFFICE,
July 19, 1917.

Commanding General Eastern Department, inviting attention to the approval
ecretary of War indorsed on page 6 hereon.
ler of the Secretary of War:

EDWARD T. DONNELLY, *Adjutant General.*

[Seventh Indorsement.]

ncer, Sam.

HEADQUARTERS EASTERN DEPARTMENT,
July 23, 1917.

djutant General of the Army, recommending that the amount of this claim
ided in the next estimate submitted to Congress for an appropriation to cover
ims. The claimant has been advised of this action.

E. E. BOOTH,
Major General Commanding.

[Eighth Indorsement.]

tional Match Range, Fla. (Miscellaneous division.)

ADJUTANT GENERAL'S OFFICE, *July 27, 1917.*

ie Quartermaster General.

HEADQUARTERS NATIONAL MATCHES,
Washington, D. C., November 22, 1916.

SPECIAL ORDERS, No. 14.

The appointment of a board of officers not being practicable, Capt. A. F. Commiskey, Cavalry, detached officers' list, quartermaster, is appointed surveying officer to make report required by Circular No. 22, War Department, Washington, April 18, 1910, as to the alleged loss or damage to certain cattle, the property of Mr. Sam Spencer, Route B, Jacksonville, Fla., alleged to have been killed or injured by rifle fire during the national matches held at State camp, Jacksonville, Fla., October 9-25, 1916.

S. W. MILLER,
Colonel of Infantry, Detached Officers' List.
Executive Officer.

EXHIBIT A.

JACKSONVILLE, FLA., October 18, 1916.

Col. S. W. MILLER,

Executive Officer National Rifle Match, State Camp Grounds, Black Point, Fla.

SIR: I have the honor to report to you that on Monday, October 9, 1916, the following cattle, belonging to me, were shot and killed by the riflemen on the range: One brindle steer 2 years old, 1 brown milch cow 5 years old, 1 yellow-pided milch cow 4 years old, 1 yellow-pided milch cow 6 years old. And the following cattle, belonging to me, were wounded by them to such an extent that they are a total loss: One yellow-pided steer, 1 dun-pided steer, 1 white and dun-pided steer, 1 yellow and white pided milch cow. The dun-pided steer has since died.

These cattle were all good range cattle and in fine condition and were worth at least \$25 per head.

I shall be glad to furnish you all detailed information in this matter you may require.

These cattle were in plain view behind the targets when the shooting began, and the attention of the officer on the grounds was called to this fact by the keeper of the camp grounds, who suggested that the cattle should be driven out before the shooting began, but there was no effort made to do so, and the shooting began and the cattle were killed as stated.

All my cattle were driven out of the grounds the day before, but the gate was left open Sunday night and so the cattle got in that night and were killed next day.

I request you to give this matter proper direction for the settlement and secure payment as soon as possible.

Thanking you for your courtesies,

Yours, very respectfully,

SAM SPENCER,
Route B, Jacksonville.

A true copy.

EXHIBIT B.

JACKSONVILLE, FLA., November 29, 1916.

Mr. ARCHIBALD F. COMMISKEY,

*Captain of Cavalry, United States Army,
War Department, Washington, D. C.*

DEAR SIR: Yours of the 23d duly received and appreciated.

I am pleased to observe you have been appointed surveying officer to make report on my claim for loss of cattle killed and wounded on the rifle range at Black Point, Fla., on October 9, 1916, as reported by my letter of October 18, 1916.

The number and description and value of the cattle killed outright:

1 brindle steer, 2 years old.....	\$20.00
1 brown milch cow, 5 years old.....	40.00
1 yellow-pied milch cow, 4 years old.....	40.00
1 yellow-pied milch cow, 6 years old.....	40.00

The number and description and value of those which have died from the wounds received:

1 dun-pied steer, 3 years old.....	\$30.00
------------------------------------	---------

per of those wounded and not killed, description and value, with statement on made of same:

ow-pied steer, \$30; shot through shoulder, crippled badly; damage at least my possession.

ie and dun-pied steer, 4 years old, \$30; shot through hip, crippled badly; least \$10; still in my possession.

ow and white-pied milch cow, 3 years old, \$40; shot in hind leg; damage at still in my possession.

EXHIBIT B.

ppreciate your kind assistance in getting this claim before Congress next and having the claim paid as soon as possible, as I can not well afford the loss venience, but I am confident from what the officers told me here that the is to treat me right at once.

g you again for your continued courtesies, I am
rs, very truly.

SAM SPENCER,
Route B, Jacksonville.

EXHIBIT C.

T OF MAJ. WILLIAM C. HARLLEE, U. S. M. C., ASSISTANT EXECUTIVE OFFICER
NATIONAL MATCHES, 1916, CONCERNING SHOOTING OF CERTAIN CATTLE.

t was reported to me, during the middle of the forenoon, that several cattle and the butts, I did not deem the loss of the cattle commensurate with the e necessary to stop work and drive off the cattle. One hundred and fifty sed by about fifty teams of about 1,000 shooters from all parts of the country t as California and Alaska and served by about 600 officers and men were in , and to drive off the cattle it would have been necessary to suspend all this, eover, to disjoint a program upon which all plans were made and dates set movements. I therefore considered that it would be more advisable to the firing and risk shooting the cattle, and gave directions accordingly.

WM. C. HARLLEE.

EXHIBIT D.

MILITARY DEPARTMENT, STATE OF FLORIDA,
STATE CAMP GROUNDS,
(OFFICE OF THE SUPERINTENDENT,
October 21, 1917.

Superintendent State camp grounds.
Executive office national matches 1916.
: Cattle on rifle range.

[Fourth indorsement.]

lying with request for further information on the attached subject, you are that I was directed by the adjutant general of Florida to see that all cattle iven off the State camp grounds not later than Sunday, October 8, 1916, and te in the afternoon had all the cattle we could find except my own three cows out of the gate and the gate closed.

Monday October 9, at about 3 o'clock, I noticed that there were quite a large of cattle directly behind the 200-yard butts and about 500 yards from the butts ected the range officer's attention to them; he said that Maj. Harllee's attention en called to the cattle and the major had ordered the firing to continue.

a little later advised that three head of the cattle had been hit and called the of some of the cattle up on the telephone and advised him that some of his cattle n the rifle range and in danger of being killed and that firing would commence clock the next morning; he said he would come over early in the morning and am out.

CHARLES F. SLATER,
Q. M. Sergt, First Class, National Guard Florida,
Superintendent State Camp Grounds.

ue copy.

EXHIBIT E.

DEPARTMENT OF JUSTICE,
OFFICE OF UNITED STATES DISTRICT ATTORNEY,
SOUTHERN DISTRICT OF FLORIDA,
Jacksonville, Fla., November 13, 1916.

Col. SAMUEL WARREN MILLER,
United States Infantry, Washington, D. C.

SIR: I have been delayed in answering your verbal request given to the clerk concerning the matter of the cattle killed during the rifle shoot at Black Point. I have been out of the city at Washington and also for a term of court at Key West.

There is no law in force in Duval County requiring the owner of cattle to keep his cattle fenced up; the so called no-fence law being in force in some counties but not in Duval.

I understand this is the information you wanted; if I can give you any further information in the matter, please let me know.

Inclosed you will find the papers left in the office.

Yours, very truly,

United States Attorney,
BY FRED BOTTS,
Assistant United States Attorney.

JACKSONVILLE, FLA., *January 2, 1917.*

Capt. ARCHIBALD F. COMMISKEY,
War Department, Washington, D. C.

SIR: Referring to your communication of November last, with reference to the injury of certain cattle at the Black Point Rifle Range, Black Point, Fla., I beg to say that a very strenuous term of court has prevented this matter from being properly investigated up to this time.

I have looked up the statutes and am unable to find any provision covering a matter of this kind. In the absence of a special statute of course suit could not be brought against the Government, and it seems to me, therefore, that it is optional in this case whether or not the Government will pay this claim, depending, it seems to me, upon what recommendation the military authorities should make.

I am of the opinion that the matter should be presented to and handled entirely by the military authorities, as they are in position to secure information that would show whether or not the claim is just.

Yours, very truly,

United States Attorney.
By FRED BOTTS,
Assistant United States Attorney.

[Fourth Indorsement.]

HEADQUARTERS NATIONAL MATCHES,
Washington, D. C., November 23, 1916.

To Capt. A. F. Commiskey, Cavalry, detached officers' list, quartermaster, surveying officer.

S. W. M.

(2 enclos.)

Letter United States district attorney, southern district of Florida, November 13, 1916.

Cir. 22, War Department, April 18, 1910.

EXHIBIT F.

FORT NIAGARA, N. Y., *May 26, 1917.*

Mr. SAM SPENCER,
Route B, RFD., Jacksonville, Fla.

SIR: Your letter of November 20, 1916, having finally reached me, I can now complete my report as survey officer on your cattle killed and wounded during the national matches, 1916.

ward determined upon after a careful study of the evidence is \$155; \$25 for animal killed and \$10 for each wounded animal.

Completion of the report requires that you signify your acceptance of this in writing to be forwarded with the report or your reasons for not accepting it.

I receive this information I shall forward the report through Col. Miller to Department.

Very respectfully,

ARCHIBALD F. COMMISKEY,
Captain, Cavalry, Detached Officer's List, Survey Officer.

JUNE 9, 1917.

F. COMMISKEY,
Fort Niagara, N. Y.

Yours of May 26 duly received and noted.

the matter may be concluded at once, I have decided to accept and hereby pay the amount you state, \$155, in settlement of my claim.

Yours, very truly,

SAM SPENCER.

The F. H. & A. H. Chappell Co. Anthracite and Bituminous Coal. 286 Bank Street.]

NEW LONDON, CONN., *July 18, 1917.*

OF THE QUARTERMASTER,
*Headquarters Northeastern Department,
25 Huntington Avenue, Boston, Mass.*

(in reply to letter of Capt. F. J. Burnham.)

Herewith enclosed please find four bills for advertising, which were contracted at the time that I recruited a motor truck company for the Quartermaster Corps.

At the time that these advertisements were inserted in the local papers I had not had instructions from your office to the effect that the department had no authority to allow any payments for bills for advertising.

It would seem to me that if this matter were taken up properly with the department that these bills could be paid. I have interviewed the various newspapers and they are not inclined to contribute this advertising, inasmuch as they have not contributed from time to time advertising for similar purposes. May I hear from you in regard to the enclosed?

We have received several inquiries from a number of the young men who have been inducted into this motor truck company as to when they are liable to be called out. Will you give me any information regarding this?

Very respectfully, yours,

HENRY C. CHAPPELL.

HEADQUARTERS NORTHEASTERN DEPARTMENT,
OFFICE OF THE QUARTERMASTER,
Office of the Quartermaster, Boston, Mass., July 20, 1917.

Quartermaster.

Capt. Henry C. Chappell, Q. M., U. S. R., care F. H. & A. H. Chappell Co., Bank St., New London, Conn.

Subject: Vouchers for advertising.

In reference to your letter of the 18th instant, you are advised that Par. 499 A. R. prohibits the publishing of advertisements prior to obtaining authority from the War Department. With a view of taking the matter up with the War Department and obtaining, if possible, authority to pay these accounts, Request for Authority to Issue, on Standard Form No. 2, is enclosed herewith for your signature.

Also each of the accounts enclosed with your letter above referred to have been put on proper form for settlement and are enclosed herewith. Attached to each of these forms is a memorandum explaining the action to be taken in each case in settling, signing the voucher, and so forth.

Please have all papers properly completed and signed and return same to this office together with this letter, at your earliest convenience.

In direction of the Quartermaster:

FRANK GEERE,
Captain, Q. M. Corps.

[First indorsement.]

OFFICE OF THE QUARTERMASTER GENERAL,
September 5, 1917.To: The Department Quartermaster, Northeastern Dept., No. 25 Huntington Avenue,
Boston, Mass.

1. Returned, inviting attention to the fact that the publication of the advertisement without the prior written authority of the Secretary of War was in violation of the law (sec. 3828, R. S.) and Army Regulations (A. R. 599), which are explicit and mandatory. Besides these restrictions the Comptroller of the Treasury has declined to approve payment of any such accounts. See decision reported in 5th Comp. Dec., 166, dated October 15, 1898, and which was published in G. O. No. 2, A. G. O., 1899.

2. The following instructions were given by the Assistant Secretary of War in a memorandum to the Quartermaster General under date of January 20, 1906:

* * * "When advertisements are published without antecedent authority, as required by Army Regulations and these instructions, the officer who is responsible for the failure to secure it will be required to pay the newspaper accounts from his private funds and look to Congress for reimbursement * * *."

These instructions have not been revoked.

3. It is also noted that in the matter of arranging the advertisement the provisions of paragraph 504 A. R. were not observed.

4. In view of the facts in this case, the ruling quoted in the preceding paragraph is applicable.

By authority of the Quartermaster General:

CHAS. P. DALY,
Captain, M. S., Q. M. Corps.

[Second indorsement.]

OFFICE QUARTERMASTER,
NORTHEASTERN DEPARTMENT,
Boston, Mass., September 8, 1917.

To Henry C. Chappell,
286 Bank Street, Boston, Mass.

1. Returned, inviting attention to preceding indorsement.

2. It is suggested that you pay these accounts, taking receipts for same, and then forward same to the Quartermaster General of the Army, asking that steps be taken to obtain congressional relief, filing copies of all papers in the case in support of your claim.

By direction of the Quartermaster:

FRANK GEERE,
Captain, Q. M. Corps.

OFFICE OF HENRY C. CHAPPELL,
New London, Conn., July 28, 1917.

From: Henry C. Chappell, recruiting officer, of the U. S. R.

To: Quartermaster Northeastern Department.

Subject: Vouchers for advertising.

1. In compliance with your letter of instruction of July 20th, herewith inclosed, please find request for authority to advertise.

2. Inclosed please find signed vouchers of the New London Daily Globe, the Day Publishing Company, the Bulletin Company, and the Telegraph Publishing Company.

Respectfully,

HENRY C. CHAPPELL,
Recruiting Officer for U. S. R.

HEADQUARTERS NORTHEASTERN DEPARTMENT,
OFFICE OF THE QUARTERMASTER,
Boston, Mass., July 30, 1917.

From: Quartermaster.

To: Quartermaster General of the Army, Washington, D. C.

Subject: Vouchers for advertising in New London Daily Globe.

Inclosed is request for authority to advertise, vouchers covering advertisements and correspondence, which is self-explanatory, relating to the organization of a motor truck company in New London, Conn. It is recommended that the amount of the inclosed vouchers for advertising, if approved, be made an item in a deficiency estimate to Congress.

G. S. BINGHAM,
Colonel, Q. M. C., U. S. A.

NORWICH, CONN., *September 18, 1917.*

To the Bulletin Company, Dr., Printers and Publishers.

U. S. Quartermaster Dept., N. E. Division.

1917.

May 21. Advertising notice, 6''	\$6.00
22. Advertising notice, 6''	6.00
23. Advertising notice, 6''	6.00
	<hr/> 18.00

(Paid Sept. 19, 1917, Moore.)

NEW LONDON, CONN., *September 19, 1917.*

H. C. Chappell, Dr., to the Telegraph Publishing Company, printers and publishers, Plant Building.

May 22, 23, 24, 25. To adv. Motor Truck Co., Quartermaster Dept., 6 in., 4 t., \$6.00.
(Sept. 19, 1917, paid, M. E. K.)NEW LONDON, CONN., *September 19, 1917.*

The Evening Day, in account with U. S. Quartermaster Reserve Corps.

May 21. To adv. Motor Truck Co., 6 in., 4 t., \$19.50.

(Sept. 19, 1917, paid, S. F. F.)

NEW LONDON, CONN., *September 22, 1917.*

Mr. Henry C. Chappell, to the New London Daily Globe, Dr., Globe Bldg., Green and Pearl Streets.

May 21. To adv. recruiting for auto truck service, 6 in., 4 t., \$15.00.

(Received payment, the New London Globe, S. T. A.)

WAR DEPARTMENT—REQUEST FOR AUTHORITY TO ADVERTISE.

From: Captain Henry C. Chappell, New London, Conn.

To: The Secretary of War, Washington, D. C.

(1) Special authority is requested to advertise for recruits for truck company Q. M. C., in accordance with law and regulations in the following-named publications, which are considered by me as the best mediums for securing publicity for the purposes of the Government: The New London Daily Globe, New London, Conn.; The New London Telegraph, New London, Conn.; The Evening Day, New London Conn.; The Bulletin (daily), New London, Conn.

Estimated cost, \$58.50.

HENRY C. CHAPPELL, *Capt.*

WAR DEPARTMENT PUBLIC VOUCHER FOR ADVERTISING.

Appropriation: Supplies, services, and transportation, fiscal year 1917. Symbol, \$18.00.

The United States, To The Bulletin Company, Dr., Norwich, Conn.

Rate per agate line for first insertion, 7 1/7 c.; each subsequent insertion, 7 1/7 c.

To publication of attached advertisement in The Bulletin of Norwich, Conn., as authorized by the Secretary of War (order attached hereto) on May 21, 22, 23, 1917, as follows:

Number of insertions ordered, 3; number of insertions charged, 3; first insertion, 84 lines, at 7 1/7 c. per line, \$6.00; 2 subsequent insertions of 84 lines each, at 7 1/7 c. per line, \$12.00. Total, \$18.00.

I certify that the above bill is correct and just; that the amount charged does not exceed the commercial or classified rates charged to private individuals, with the usual discount; and that payment therefor has not been received

THE BULLETIN COMPANY.

By WILLIAM H. OAT, *Mgr.*

ATTENTION.

The recruiting office for the U. S. Quartermaster's Reserve Corps, will be open from 4 p. m. to 7 p. m. daily, at the Municipal Building, State street, New London, Conn.

The purpose of this office is to recruit a truck Company for the U. S. Quartermaster's Dept. composed of 34 first-class sergeants and one cook. This is the best proposition yet offered to those desiring to enter the reserves. Those eligible will immediately

upon being accepted receive the rank of First Class Sergeant and be placed in charge of a two or three ton truck for service in the Quartermaster's Dept. Municipal building, State street, 4. p. m. to 7 p. m.

MAJOR HENRY ADAMS,
CAPT. HENRY C. CHAPPELL,
DR. G. S. ALLYN,
Committee.

WAR DEPARTMENT,
New London, Conn., July 28, 1917.

I certify that the style of the advertisement, as evidenced by the clipping above attached, is in accordance with the requirements of the department, and that said advertisement appeared in the paper and on the dates as stated.

(Signed.) HENRY C. CHAPPELL,
Capt., Conn. N. G., Retired.

WAR DEPARTMENT—PUBLIC VOUCHER FOR ADVERTISING.

Appropriation: Supplies, services, and transportation, fiscal year 1917. Symbol, \$6.00.

The United States to the Telegraph Publishing Company, Dr., New London, Conn. To publication of attached advertisement in The New London Telegraph of New London, Conn., as authorized by the Secretary of War (order attached hereto) on May 21, 22, 23, 24, 1917, as follows:

Number of insertions ordered, 4; number of insertions charged, 4; first insertion, 6 inches, at 25c per in., \$1.50; 3 subsequent insertions of 6 inches each, at 25c per in., \$4.50. Total, \$6.00.

I certify that the above bill is correct and just; that the amount charged does not exceed the commercial or classified rates charged to private individuals, with the usual discounts; and that payment therefor has not been received.

THE TELEGRAPH PUBLISHING COMPANY.
By JULIAN D. MORAN, Pres. and Mgr.

AUTOMOBILE TRUCK-DRIVERS WANTED FOR QUARTERMASTER DEPT. RESERVE CORPS,
U. S. ARMY.

The recruiting office for the U. S. Quartermaster's Reserve Corps, will be open from 4 p. m. to 7 p. m. daily, at the Municipal Building, State Street, New London, Conn.

The purpose of this office is to recruit a Truck Company for the U. S. Quartermaster's Dept., composed of 34 first-class sergeants and one cook. This is the best proposition yet offered to those desiring to enter the reserves. Those eligible will immediately upon being accepted receive the rank of First Class Sergeant and be placed in charge of a two or three ton truck for service in the Quartermaster's Dept. Municipal Building, State Street, 4 p. m. to 7 p. m.

MAJOR HENRY ADAMS,
CAPT. HENRY C. CHAPPELL,
DR. G. S. ALLYN,
Committee.

WAR DEPARTMENT.

I certify that the style of the advertisement, as evidenced by the clipping above attached, is in accordance with the requirements of the Department, and that said advertisement appeared in the paper and on the dates as stated.

HENRY CHAPPELL,
Capt. Conn. N. G. Ret.

Appropriation: Supplies, services, and transportation, fiscal year 1917, \$15.

The United States to The New London Daily Globe, Dr.

To publication of attached advertisement in The New London Daily Globe, of New London, Conn., as authorized by the Secretary of War (order attached hereto) on May 21, 22, 23, 24, 1917, as follows:

Number of insertions ordered, 4; number of insertions charged, 4; first insertion, 48 lines, at 12½ cents per line, \$6; 3 subsequent insertions of 48 lines each, at 6½ cents per line, \$9. Total, \$15.

I certify that the above bill is correct and just; that the amount charged does not exceed the commercial or classified rates charged to private individuals, with the usual discounts; and that payment therefor has not been received.

THE NEW LONDON DAILY GLOBE.
By SAMUEL T. ADAMS, *Editor.*

ATTENTION.

The recruiting office for the U. S. Quartermaster's Reserve Corps, will be open from 4 p. m. to 7 p. m. daily, at the Municipal Building, State Street, New London, Conn.

The purpose of this office is to recruit a Truck Company for the U. S. Quartermaster's Dept. composed of 34 first class sergeants and one cook. This is the best proposition yet offered to those desiring to enter the reserves. Those eligible will immediately upon being accepted receive the rank of First Class Sergeant and be placed in charge of a two or three ton truck for service in the Quartermaster's Dept. Municipal building, State Street, 4. p m. to 7 p. m.

MAJOR HENRY ADAMS,
CAPT. HENRY C. CHAPPELL.
DR. G. S. ALLYN,

Committee.

WAR DEPARTMENT,
New London, Conn., July 28, 1917.

I certify that the style of the advertisement, as evidenced by the clipping above attached, is in accordance with the requirements of the department, and that said advertisement appeared in the paper and on the dates as stated.

HENRY C. CHAPPELL,
Captain, Connecticut National Guard, Retired.

WAR DEPARTMENT—PUBLIC VOUCHER FOR ADVERTISING.

Appropriation: Supplies, services, and transportation, fiscal year 1917. Symbol, \$19.50.

The United States to The Day Publishing Company, Dr., New London, Conn.

To publication of attached advertisement in the Evening Day of New London, Conn., as authorized by the Secretary of War (order attached hereto), on May 21, 22, 23, 24, 1917, as follows:

Number of insertions ordered, 4; number of insertions charged, 4; first insertion, 6 inches, at \$1.00 per in., \$6.00; 3 subsequent insertions of 6 inches each, at 75¢ per in., \$13.50. Total, \$19.50.

I certify that the above bill is correct and just; that the amount charged does not exceed the commercial or classified rates charged to private individuals, with the usual discounts, and that payment therefor has not been received.

THE DAY PUBLISHING COMPANY,
By THEODORE BODENWEIN, *Treas.*

ATTENTION.

The recruiting office for the U. S. Quartermaster's Reserve Corps, will be open from 4 p. m. to 7 p. m. daily, at the Municipal building, State Street, New London, Conn.

The purpose of this office is to recruit a truck company for the U. S. Quartermaster's Dept. composed of 34 first-class sergeants and one cook. This is the best proposition yet offered to those desiring to enter the reserves. Those eligible will immediately upon being accepted receive the rank of first class sergeant and be placed in charge of a two or three-ton truck for service in the Quartermaster's Dept. Municipal building, State street, 4 p. m. to 7 p. m.

MAJOR HENRY ADAMS,
CAPT. HENRY C. CHAPPELL,
DR. G. S. ALLYN,

Committee.

NEW LONDON, CONN., *July 28, 1917.*

I certify that the style of the advertisement, as evidenced by the clipping above attached, is in accordance with the requirements of the department, and that said advertisement appeared in the paper and on the dates as stated.

HENRY C. CHAPPELL,
Capt. Conn. N. G. Ret.

OCTOBER 13, 1917.

QUARTERMASTER GENERAL, UNITED STATES ARMY,
Washington, D. C.

SIR: During the month of May I was requested by the quartermaster of the Northeastern Department, Boston, to establish a recruiting station for the purposes of recruiting a motor truck company for the Northeastern Department, also some quartermaster clerks.

In compliance with this request I gave up practically 10 days from my business, devoting it to the interest of the Government, and secured the applications of over 75 motor truck drivers and clerks. A complete company of motor truck drivers was mustered into the service, together with several clerks. These men are now all in the service.

After lengthy correspondence with the Northeastern Department, I am informed that I exceeded my authority in contracting for \$58.50 worth of advertising bills, said advertising being placed in the local daily press.

I herewith inclose all the papers and correspondence in regard to the matter and respectfully ask that steps be taken to obtain congressional relief.

I respectfully request the favor of a reply.

Very truly, yours,

HENRY C. CHAPPELL,
New London, Conn.

[First Indorsement.]

OFFICE OF THE QUARTERMASTER GENERAL,
October 16, 1917.

To the Secretary of War for his consideration.

2. In view of the assistance rendered by Mr. Henry C. Chappell, as shown by these papers, it is recommended that authority be granted for submittal of an estimate to Congress for reimbursement of the amount necessarily expended by him in paying the newspaper advertising accounts in question.

By authority of the Quartermaster General:

D. L. BRAINARD,
Brigadier General, Q. M. C., N. A.

[Second Indorsement.]

WAR DEPARTMENT, *October 17, 1917.*

To the Quartermaster General.

Approved.

WM. M. INGRAHAM,
Acting Secretary of War.

To Estimates Branch for necessary action.

TREASURY DEPARTMENT,
 OFFICE OF THE AUDITOR FOR THE WAR DEPARTMENT,
Washington.

To the disbursing officer:

Suspensions on this difference sheet show items upon which final action has not yet been taken, for the reasons stated. They have not yet been passed to your credit because, for these reasons, it appears that you may not be entitled to such credit, and they have not been disallowed, because it is desired to give you an opportunity to remove the apparent objections thereto. These objections are subject to removal by satisfactory explanation, or, if such explanation can not be made, then by a refundment of the amounts noted as overpayments.

A suspension indicates that final action has not yet been taken by this office; hence no appeal can be taken to the Comptroller of the Treasury on such items, he having no jurisdiction over accounts until after the auditor has taken final action, either by allowing or disallowing. You will understand, therefore, that your reply should be made to the auditor and not to the Comptroller.

If your explanation is satisfactory, or refundment is made, the auditor will remove the suspension. If, however, you do not agree, in whole or in part, with the auditor's finding as set forth in the difference sheet, and he does not accept your view as set forth in your reply, the item will be disallowed in a subsequent settlement, when you will have the right of appeal to the Comptroller.

Items shown on the difference sheet as disallowed, as distinguished from suspended, are under the jurisdiction of the comptroller for the period of one year from date of disallowance (which date appears opposite the item), and any appeal from such item

should be addressed directly to the Comptroller of the Treasury, and not to this office. Such appeals, to be entertained, must be filed so as to reach the comptroller within one year from the date of the disallowance.

Respectfully,

J. L. BAITY,
Auditor for the War Department.

Statement of differences.

[D. S. No. 1, Certificate No. 41721, dated July 13, 1917.]

TREASURY DEPARTMENT,
OFFICE OF AUDITOR FOR WAR DEPARTMENT,
Washington, D. C., July 13, 1917.

HENRY L. NEWBOLD,
Major, Field Arty, U. S. A.,
Office Chief of Staff, War Dept., Washington, D. C.

SIR: You are hereby advised that a settlement has been made of your Quartermaster Corps accounts at Constantinople, Turkey, from November 4, 1916, to April 30, 1917, under bond dated None, 19—, and a balance found due the United States which differs from the balance stated by your account current for the period last mentioned as shown by copy of difference sheet herewith, which includes all outstanding differences and charges from the books of the Treasury.

Auditor's balance due the United States.....	\$2, 251. 31
Officer's balance due the United States.....	74. 26
Difference.....	2, 177. 05

An immediate reply to this difference sheet is requested.

True copy.

Respectfully,

J. L. BAITY, Auditor.
By J. L. ANDERSON.

(Major Henry L. Newbold, quarter ending March 31, 1917.)

Vou. 1. Suspended: S. S. & T./1917..... \$19. 44

Cablegram 45 words to War College Division 5.40 ltq., @3.60=\$19.44. The copy of the cablegram filed with voucher does not appear to be a copy of the cablegram actually sent. A copy of the cipher telegram as sent is required.

Account current—April 1 to 30, 1917.

Disallowed July 13, 1917: Fay/1917.....	\$1, 820. 84
S. S. & T./1917.....	326. 77
Officer takes credit for loss on sale of check #3, \$2,728.10, April 12, 1917, alleged to be \$1,394.36.....	1, 394. 36
Loss on sale of check #4, \$1,534.04, April 24, 1917, alleged to be.....	763. 25
Total.....	2, 157. 61

Officer's cash account of account current from April 1 to 30, 1917, shows the following statements:

Sale of check #3, \$2,728.10 yielding at the rate of \$9.00 U. S. to the ltq. (Turkish pound) 203.1227 ltq. This amount of Turk. pounds is the equivalent of officer's pay voucher #1, January 1 to March 31, 1917, \$1,333.74, computed at the rate of Treas. Dep. Cir. on values of foreign coins of 0.044 for the gold piaster.

Sale of check No. 4, \$1,524.04, yielding at the rate of \$8.757 U. S. to the ltq. 175.1795 ltq. This amount of Turk. pounds is equivalent to officer's pay voucher #5, April 1 to 30, 1917, \$440.79, computed at the rate of Treas. Dep. Cir. on values of foreign coins of 0.044=100.1795 ltq. and to vou. 3, for services paid to interpreter and clerk, November 1, 1916, to April 15, 1917, at \$60.00 per month. \$330.00, S. S. & T./1917, computed at the rate of 0.044, mentioned above, representing 75.00 ltq. Total, \$770.79 at 0.044 equivalent to 175.1795 ltq.

In view of the above statements the alleged loss appears to be based on the following figures:

Check #3 in payment of pay vou. 1.....	\$2,728.10
Actual amount of pay vou. 1.....	1,333.74
Loss charged to pay, etc.,/1917.....	1,394.36
Part check #4, in payment of pay vou. 5, computed thus: $100.1795 \times 8.757 =$	877.27
Actual amount of pay vou. 5.....	440.79
Loss charged to Pay, Army/1917.....	436.48
Part check #4, in payment of voucher 3, computed thus: $75.00 \times 8.757 =$	656.77
Actual amount of voucher 3.....	330.00
Loss charged to S. S. & T./1917.....	326.77

These checks, Nos. 3 and 4, dated April 12 and 24, 1917, were drawn on the eve of officer's departure from Turkey, they cover pay and services, beginning January, 1917, and November 1, 1916, respectively, it is evident that the rates of \$9.00 and \$8.757 are the ones existing on April 12 and 24, 1917, and not on the dates on which said pay and services for each month were due. It appears that the rates prior to April were more favorable, besides above rates are gold rates. Debts incurred in Turkey in Ltq. without specifying gold are payable in paper, the Ltq. being worth on December 31, 1916, \$3.60, as shown by evidence of Banque d'Athènes Constantinople, December 30, 1916, attached to account current, quarter ending December 31, 1916. The interpreter was hired at \$60.00 per month, if he refused to take a check on the Treasurer of the U. S. he was entitled to the equivalent of his pay of \$50.00 for December, 1916, at the rate of exchange of the Turkish currency in circulation, which was on December 31, 1916, \$3.60, a Turkish pound. Under these conditions no loss results to the U. S. Government. Officer's method of payment means that he charges to the United States nearly \$120.00 a month for an agreement made at \$60.00, and which as per allotment should not exceed \$30.00 a month.

It appears that officer's method of payment by check drawn on the Treasurer of the United States against the Treasury circular equivalent of his pay and service vouchers is not due to any exigency and no evidence is furnished to show that the officer had to sustain an actual loss or a deduction made by the bank for handling or cashing his pay check on the Treasurer of the U. S. It appears that officer is of the opinion that the decision of the Comptroller of the Treasury, July 16, 1915, re Lt. Col. Spencer Cosby, France, applies to Turkey without reserve and that he is entitled to account for a loss when a comparison between the current commercial rate and the one of the Treas. Dep. Cir. favors the showing of a loss by exchange.

The check #3, drawn for \$2,728.10 exceeds the amount of pay vou. 1, \$1,333.74 by \$1,394.36. The check #4, drawn for \$1,534.04 exceeds the amount of pay vou. 5, \$440.79, by \$1,093.25, and the amount of service vou. 3, \$330.00 by \$764.04.

The foregoing demonstrates plainly that officer's case is not a parallel one to the cases of Lt. Col. Spencer Cosby and Major J. A. Shipton, treated in the Decisions of the Comptroller of the Treasury, dated July 16 and 28, 1915, because said officers were reduced to draw their pay in local currency, having no other funds on hand and could therefore not take advantage of the current commercial values of the foreign currency by drawing their checks on the Treasurer of the United States in payment of their pay vouchers.

Officer's case is in line with the decision of the comptroller, dated January 28, 1916, in the case of Surgeon General of Public Health Service, China. In view of the foregoing the excess payments of \$326.77, S. S. & T., 1917, and \$1,830.84, pay, etc., of the Army, 1917, are not proper charges against the United States and are now disallowed. Further, officer's attention is called to the fact that the alleged loss by exchange of \$1,830.84 represents 103% of officer's vouchers for pay for four months, amounting to \$1,774.53. Assuming that he would apply above method of charging loss by exchange to the total amount of one year's pay, he would draw \$5,492.52 in addition to his annual pay as fixed by law and regulation. It follows that the \$600.00 appropriated by Congress under pay, etc., of the Army for payment of exchange, was not intended to cover such items as computed by officer by comparing the current commercial rate of exchange with the rate published on the Treasury Department Circular.

Total difference, \$2,177.05.

TREASURY DEPARTMENT,
Washington, November 17, 1917.

Appeal No. 27392.—A. R. G.

Lieut. Col. H. L. Newbold, Field Artillery, U. S. Army, applied September 22, 1917, for revision of the action of the Auditor for the War Department in disallowing (settlement No. 41721 of July 13, 1917) the amount of \$2,157.61 in his quartermaster accounts while military attaché at Constantinople, Turkey.

The amount represents the difference between the amount paid for Turkish gold with which to pay the officer's salary and his clerk's salary, and the amount of those salaries in United States money.

The officer states that at the time (April, 1917) he was under orders to leave Turkey because of the severance of diplomatic relations, and it was necessary for him to pay off his clerk and pay his own salary in order to meet his traveling and other expenses; that the paper money had depreciated—the difference between gold and paper being 250 and 290%; that a check on the United States could not be sold except at a prohibitive loss; and hence he purchased Turkish gold and paid the salaries in gold.

Check No. 3, dated April 12, 1917, was issued in favor of G. N. Baker for \$2,728.10. In connection therewith it is certified that at the rate of \$9 to the Turkish pound, the proceeds amounted to 303.1227 Ltq. in gold, equivalent at the mint valuation of \$4.40 to the pound to \$1,333.74. The difference between the amount of the check and the amount received in gold, according to this computation, is \$1,394.36.

The American consul certified that the existing rate of exchange there at the time for bills drawn upon Washington was \$9, payable in Turkish gold pound.

Check No. 4, dated April 24, 1917, is reported to have been issued to M. Rouso for \$1,534.04. In connection therewith it is certified that at the rate of \$8.757 to the Turkish pound the proceeds amounted to 175.1795 Ltq. in gold, equivalent at the mint valuation of \$4.40 to the Ltq. to \$770.79. This check is still outstanding. According to this computation, the difference between the amount of the check and the amount received is \$763.25.

The American consul certified that the rate of exchange there at the time for bills drawn upon Washington was \$8.757, payable in Turkish gold.

Who were G. N. Baker and M. Rouso is not disclosed. The transactions do not appear to have been made through banking channels at least so far as concerns check No. 3, the endorsements on it showing that it passed from G. N. Baker to the order of Catherine Anderson Baker, and from her to the order of the National City Bank, of New York City, which obtained payment July 26, 1917.

The transactions show checks for a total of \$4,262.14, purchasing Turkish gold which had a United States mint value of \$2,165.15.

It is apparent that the gold coin was procured under abnormal conditions. Whatever may be the propriety for using the mint value under ordinary conditions it can not be taken as the proper comparative value with respect to these transactions.

If the money cost more than the coin it represented, it was because of its being gold as distinguished from Turkish paper money and not because of exchange conditions with the United States.

Under the conditions reported by the officer exchange is practically destroyed, and the transactions become bargains and sales, limited only by what can be gotten out of the buyer.

It involves extraordinary expenses for which the ordinary appropriations (Pay of the Army, 1917, and supplies, services, and transportation, Q. M. C., 1917), are not available.

The claim of the officer for such expense is of a class that properly addresses itself to Congress for relief.

The disallowance by the auditor is affirmed.

W. W. WARWICK, *Comptroller*.

CAMP ROBINSON, Wis.,
September 18, 1917.

From: Lieut. Col. H. L. Newbold, Field Artillery.

To: The Comptroller of the Treasury, Treasury Department, Washington, D. C.

Subject: Appeal from action of the Auditor for the War Department.

1. In view of your decision of July 16th and 28th, 1915, in the case of Majors Cosby and J. A. Shipton, respectively, regarding the cost of exchange incurred by military attachés in their capacity as acting quartermasters and for the further reason that I believe the payments as made credits claimed by me were justified in reason and fairness, I have the honor to appeal from so much of the action of the Auditor for the War Department sheet No. 1, certificate No. 41721, dated July 13, 1917, as disallows the amounts of \$1,830.84 and \$326.77, pertaining to my quartermaster money account,

for the quarter ended April 30, 1917, rendered by me as acting quartermaster while major of Field Artillery and military attaché at Constantinople, Turkey.

2. In connection with this subject, I desire to state that on my arrival at Constantinople, Turkey, in the latter part of 1916, I found the money market in such condition that payment of my salary by myself as acting quartermaster would cost the Government what seemed to be an exorbitant amount of exchange and, therefore, I arranged to have my pay accounts for October, November, and December, 1916, paid in the United States and placed to my credit with a bank in this country so that my brother could arrange to ship to me United States gold through the State Department diplomatic pouch such amounts as I required to meet my personal expenses. The last gold shipment from the United States was received through my brother just before the rupture of diplomatic relations with Turkey about April 20. This method of obtaining gold, therefore, was not available after that date, which compelled me to buy Turkish gold with which to pay the salaries of myself and my clerk in order that I might close my office and have funds necessary to travel back to the United States. There was also a real possibility that I would be interned, though this was not a proper diplomatic procedure. In December, 1916, I cabled the War Department to furnish me with \$5,000 United States gold by shipment through the State Department diplomatic pouch, but received neither the money nor a reply to the cablegram. A copy of such cablegram is filed with my accounts in the Auditor's office. The American Ambassador at Constantinople and all of his attachés, including myself, having received orders from the State Department to leave that place and return to the United States, I was compelled to pay myself as acting quartermaster the salary due me to include April 30, 1917, as well as my clerk, who was a Greek and absolutely needed the money due him in order that he might meet his expenses as he had accepted a position with the military attaché by reason of which he was unable to obtain other employment at Constantinople under the conditions then existent.

3. The conditions in Turkey were extraordinary, the economic conditions being dependent upon the price of gold, as Turkish paper money was printed whenever funds were needed and no gold was deposited to guarantee the redemption of this paper and it had none except the open statement by the Germans that they guaranteed it. Therefore, Turkish paper money depreciated (the difference between Turkish gold and Turkish paper was between 250 and 290 %) and the prices of supplies and services rose in proportion to its depreciation, then they further rose to correspond with shortages of goods in a blockaded country. For example, bread rose to 7½ times normal prices, and sugar to 60 times normal prices; other things varying between these prices. It was on account of this high cost of living that the State Department gave an increase of some 20 or 30 % to the salaries of the embassy officers in Constantinople, to cover the increased cost of living; and all State Department salaries were paid in gold. In this case, in Turkey, a blockaded country in war, and with diplomatic relations severed with the United States, which ended all means of communication (as Germany controlled the only railroad, through Bulgaria, Servia, and Austria) it was almost impossible to sell a check on the United States in Constantinople except at a prohibitive loss. And furthermore, it was absolutely necessary that I pay myself this salary in order to meet my traveling expenses, being under orders to leave the country, also to meet other expenses contracted in Constantinople or to be incurred. The question is whether or not officers of the Army are to have their salaries depreciated. For gold is the universal standard of the world, and paper currency and checks fluctuate with the redeemable value in gold of the paper currency and the exchangeable value of the check. Following the practices obtaining in the case of the Naval Officers on duty on the *Scorpion*, who were paid under the instructions of the Navy Department the equivalent of their salaries in Turkish gold, based on the bullion or mint rate of one pound equals \$4.40 United States currency, and with the understanding that this was the accepted rate for Army quartermasters, I ascertained the amount for which I would have to draw my check in order to obtain the number of pounds in Turkish gold at the rate of \$4.40 to which I would be entitled as salary and then exchange such check for said gold. As the contract with my clerk and interpreter called for a salary of \$60 per month United States currency, I followed the same method in making payment of his salary. This action was in conformity with the practice of the State Department at that place in connection with the payment of the employees of the office of the Ambassador. It would have been a great injustice to this clerk to have paid him the equivalent of his salary in Turkish paper money and I believe that he was properly entitled under his contract and under the circumstances to payment of such equivalent in Turkish gold, as I had no United States gold with which to make such payment and could not get it. Furthermore, it would not have been fair to him to have compelled him to accept a check on the Treasurer of the United States for the amount

of his salary when the rate of exchange was so unfavorable. Such action would have been tantamount to the Government's refusal to comply with its contract, regardless of what may have been allowed under the law.

4. The effect of the argument presented by the auditor in support of his action simply means that in my case and the case of my interpreter I had one of two ways open to make payment of our salaries: (a) Show payment of vouchers by check, which involves no question of exchange so far as the Government is concerned, the payee taking check received in payment and cash it as payees by check must do accepting whatever local money they can get for it, or (b) draw an official disbursing officer's check for cash for the amount in dollars that the voucher calls for and exchange such check for local money then show payment of voucher by cash receipting same for number of units of local money received as equivalent to the number of dollars voucher calls for, which also involves no loss or gain by exchange so far as the Government is concerned. To follow either of these methods would require no appropriation for loss by exchange because no loss could occur. Every man of finance knows that there is a loss by exchange, both foreign and domestic, and when that much is admitted, the argument of the auditor fails. The payment by the Government of salaries or obligations fixed in terms of United States currency by the use of foreign money not only involves the question of exchange paper but also the question of conversion or ascertaining real equivalent of United States gold dollars in the units of the foreign money used. That is to say without considering the question of exchange the real equivalent of a pound in Turkish gold is considered as \$4.40 United States gold. In Constantinople \$4.40 in United States gold would probably be at all times equivalent commercially with slight variations if any, to one pound Turkish gold. But there was an enormous difference between the comparative commercial value of United States gold and United States checks as compared with Turkish pound gold when I offered my United States Treasury checks for Turkish gold. That country commercially did not want United States checks or paper as the financial houses there could not use it to advantage at anywhere near par value. I did not want their paper money as it was of uncertain value and as I was leaving the country I could not use it except at a prohibitive loss. Consequently to obtain Turkish gold, which was the only money obtainable with an intrinsic value, the equivalent of my salary in United States gold, I was compelled to draw my official check for cash for more than twice the amount called for in United States currency by the vouchers which were paid with the proceeds.

5. With respect to the auditors statement that my case falls under the decision of your office of January 23, 1916, in the case of the Public Health Service in China, I see no analogy existing between that case and mine. It appears to me that the principle of the decisions referred to in paragraph 1, above, have made application to my case and under the circumstances shown herein in addition to the facts shown by my accounts in question, I should be given full credit as claimed by me in such accounts.

6. The fact that Congress appropriated only \$600 to cover cost of exchange incurred by quartermasters would not appear to have any bearing on this case as under a decision of your office the amounts appropriated for specific items unless otherwise limited may be exceeded provided the total of the appropriation of which they form a part be not exceeded. I understand from information obtained in the War Department that this item of \$600 for exchange has been regularly estimated for several years back without change because, under your decision referred to above, as long as any amount was appropriated for this purpose as much as was needed, subject to the limitations stated, could be expended, some years more than \$600 being spent for loss by exchange and other years less.

7. Your reply should be addressed to me care of The Adjutant General of the Army, Washington, D. C.

Yours respectfully,

H. L. NEWBOLD.

[Paraphrase.]

Cipher telegram sent the Department of State.

DECEMBER 16, 1916.

AMERICAN LEGATION, Copenhagen.

678 to Copenhagen 2339 to Washington Dec. 16, 1 p. m.

For president War College, to be referred to the Navy Department.

On account of the ruinous rate required in making exchange drafts the Military Attaché requests five thousand dollars gold coin to be sent him by the collier *Cæsar* or in the diplomatic pouch for Army pay and the like.

ELKUS, American Ambassador.

A true copy:

FREDERICK WIRTH, jr.

AMERICAN EMBASSY,
CONSTANTINOPLE, TURKEY,
February 19, 1917.

Maj. H. L. NEWBOLD,
U. S. Military Attaché, Constantinople.

DEAR SIR: The following is a statement of the cost of telegram sent by this embassy for account of the military attaché, on December 16, 1916:

Date, Dec. 16th/16. Destination, Chief War College, Washington. Words, 45.
Piasters, 540.

Will you kindly forward the above sum to the embassy for its reimbursement.

FREDERICK WIRTH,
Chief Clerk of Embassy.

The above-mentioned telegram was sent on official business through the American embassy, Constantinople, and the State Department to the War College Division, War Department.

I further certify that the rate of exchange for the payment of the above-mentioned piastres for this telegram, was at the rate of \$3.60 per lira (100 piasters), and that said money was obtained by me at this rate.

H. L. NEWBOLD,
Major, F. A. Military Attaché.

Receipt for cash expended for cablegrams.

Received February 19, 1917, from Maj. H. L. Newbold, military attaché, in person and in cash, the sum of five hundred forty piastres, equal \$19.44, in payment in full for the above bill, which is hereby certified to be correct and just and for which payment has not heretofore been received.

(Sgd.) FREDERICK WIRTH,
Chief Clerk of Embassy.

A true copy:

H. L. NEWBOLD, Major, F. A.

PLATTSBURG BARRACKS, N. Y.,
November 21, 1917.

From: H. L. Newbold, colonel 16th Field Artillery.

To: Adjutant General of the Army, Washington, D. C.

(Through Chief Army War College).

Subject: Request for relief from Congress.

1. In view of the action of the Auditor of the War Department in disallowing (settlement No. 41721 of July 13, 1917) the amount of \$2,157.61 in accounts of Colonel H. L. Newbold, 16th F. A., U. S. A., then major, while military attaché at Constantinople, Turkey, and the action of the Comptroller of the Treasury on his appeal No. 27392, relief from Congress is requested, as the comptroller states, in his action of November 17, "the claim is of a class that properly addresses itself to Congress for a relief."

[First indorsement.]

WAR DEPARTMENT, A. G. O.,
December 4, 1917.

To the Quartermaster General, who is directed to submit an estimate to Congress to relieve Colonel H. L. Newbold of \$2,157.61, the amount of money which the Comptroller of the Treasury rules he is accountable for to the United States.

By order of the Secretary of War:

JOHN S. JOHNSTON,
Adjutant General.

RIFLE RANGES FOR CIVILIAN INSTRUCTION.

The CHAIRMAN. On pages 71 and 72 there are items for rifle ranges for civilian instruction. The amount of the appropriation for the purpose last year was \$320,000, and you are asking this year for \$1,720,000.

Col. DALY. Our estimate is only \$20,000, the same as last year. The rest of that, I think, is for ordnance.

The CHAIRMAN. Your estimate only covers the first estimate of \$20,000?

Col. DALY. Yes, sir; that is the same as last year.

The CHAIRMAN. Did you expend the \$20,000 you got last year?

Col. DALY. Not all of it. I will give you a statement in regard to the balance.

Rifle ranges, civilian instruction.

	Estimated, fiscal year 1919.	Expended, fiscal year 1917.
Clerical services.....	\$2,400.00	\$1,230.58
Supplies and materials.....	16,800.00	17,366.09
Office supplies.....	600.00	208.64
Travel expenses.....	200.00	53.47
Total.....	20,000.00	18,853.78

The CHAIRMAN. The next item, on page 72, is under the head of "Civilian military training," and the item is for "Civilian military training camps, \$6,018,000."

The first part of that comes under your jurisdiction?

Col. DALY. We furnish the clothing, camp maintenance, transportation, the structures, the water, the fuel, and also cover the matter of damages resulting from field exercises. The second section of that refers to ordnance.

The CHAIRMAN. My recollection is that Gen. Babbitt said that he did not think that was necessary this year. What have you to say about that?

Col. DALY. We have a sufficient unexpended balance, Mr. Chairman, to take up our needs under that item, but that balance is not available for the fiscal year 1919. If that balance were made available for the year 1919, we would not need this money.

The CHAIRMAN. How much is that balance?

Col. DALY. I will have to get that amount for you.

Mr. ANTHONY. Is it the opinion of the War Department that it is inadvisable to carry on this training during the war?

Col. DALY. So far as we are concerned, we have not been in a position to furnish the equipment. That is the reason the money we got last year has not been expended.

The details are as follows:

Deficiency act June 15, 1917.....	\$3,440,000
Deficiency act Oct. 6, 1917.....	1,240,000
Total.....	4,680,000

Status of following appropriations, January 10, 1918:

	Amount ap- propriated.	Expended.	Available balance.
Quartermasters' supplies, equipment, etc., Reserve Officers' Training Corps:			
1917-18.....	\$1,215,000.00	\$68,112.98	\$1,146,887.02
1918.....	3,170,000.00	211,614.84	2,958,385.16
(Above, act May 12, 1917.)			
Civilian military training camps:			
1916-17 (act Aug. 29, 1916).....	938,682.00	925,182.00	11,500.00
1817-18 (act June 15, 1917).....	3,440,000.00	3,439,547.34	452.66
1918 (act May 12, 1917).....	\$3,281,000.00		
1918 (act Oct. 6, 1917).....	1,240,000.00		
	4,621,000.00	4,589,330.16	31,669.84

* Deficit.

WAR DEPARTMENT,
OFFICE OF THE QUARTERMASTER GENERAL OF THE ARMY,
FINANCE AND ACCOUNTING DIVISION,
Washington, January 10, 1918.

Memorandum for Administrative Division.

Attention Capt. Daly, M. S., Quartermaster Corps.

1. Accompanying this is statement requested by you covering expenditures for first civilian military training camp period, from May 15 to August 15, 1917, inclusive, as shown by reports, and "analysis of expenditures" in cost-keeping branch, this division.

H. R. LORD,
Colonel, Quartermaster Corps.

Expenditures for first civilian military training camp period, May 15 to Aug. 10, 1909, in cost-keeping branch, office Quartermaster General.

Station.	Appropriation.	Pay.		Subsistence.	Clothing.	Transportation, 24 cents per mile.	Fuel and light.	Other quartermaster supplies and services.
		Regulars.	Civilians.					
Benj. Harrison.....	Quartermaster.....	86.67	81,151,816.17	8113,244.50	867,719.92	.....	87,462.97	8113,872.37
	Civilian military training camp.....	.....	.....	294,753.84	7,948.55	843,778.54	3,413.52	297,365.99
	Total.....	8.67	1,151,816.17	347,998.34	95,668.47	43,778.54	10,886.49	412,928.36
Des Moines.....	Quartermaster.....	.....	130,216.33	46,809.32	.....	.....	.....	20,189.90
	Civilian military training camp.....	.....	.....	38,228.42	13,261.50	33,940.67	.....	20,668.06
	Total.....	.....	130,216.33	85,037.74	13,261.50	33,940.67	.....	40,857.96
Leon Springs.....	Quartermaster.....	.....	509,903.02	111,080.61	.....	8,195.57	4,314.18	379,449.02
	Civilian military training camp.....	.....	.....	38,391.83	35,106.47	29,656.56	2,207.60	231,028.09
	Total.....	.....	509,903.02	150,072.44	35,106.47	37,854.12	6,521.78	610,477.11
L. H. Roofs.....	Quartermaster.....	50,868.57	570,755.82	.....	1,137.38	3,446.09	5,067.17	56,920.92
	Civilian military training camp.....	.....	.....	62,639.69	28,012.71	38,678.77	.....	94,657.05
	Total.....	50,868.57	570,755.82	62,639.69	29,200.09	42,124.86	5,067.17	151,577.96
McPherson.....	Quartermaster.....	149,543.03	410,514.06	99,905.43	.....	.....	1,776.68	80,504.01
	Civilian military training camp.....	.....	.....	42,027.80	48,580.00	12,171.86	.....	153,115.92
	Total.....	149,543.03	410,514.06	141,933.23	48,580.00	12,171.86	1,776.68	233,620.93
Madison Barracks.....	Quartermaster.....	12,091.14	126,513.02	6,893.26	.....	.....	5,506.15	216.00
	Civilian military training camp.....	.....	.....	53,462.24	28,265.50	23,778.55	.....	190,429.29
	Total.....	12,091.14	126,513.02	60,355.50	28,265.50	23,778.55	5,506.15	190,645.29
Fort Monroe.....	Quartermaster.....	2,002.12	294,955.97	.....	.....	.....	3,610.57	36,229.52
	Civilian military training camp.....	.....	.....	59,228.37	17,826.32	21,236.86	.....	75,316.86
	Total.....	2,002.12	294,955.97	59,228.37	17,826.32	21,236.86	3,610.57	111,546.38
Fort Myer.....	Quartermaster.....	.....	556,527.00	.....	.....	13,275.73	.....	.....
	Civilian military training camp.....	.....	.....	146,503.97	24,091.48	12,712.50	2,981.19	236,381.19
	Total.....	.....	556,527.00	146,503.97	24,091.48	25,988.23	2,981.19	236,381.19

Various stations.....	Quartermaster.....			79.26	4,034.84		
	Civilian military training camp.....					81,302.33	3,508,446.47
	Total.....			88,907.30	70,803.08	42,641.87	2,512,200.52
				467,609.87	408,327.58		
Total expenditures.....	Quartermaster.....						
	Civilian military training camp.....					124,004.20	6,020,646.99
	Total.....			556,517.17	479,130.66		
Appropriation.							
				Quartermaster.	Civilian military training camp.	Total.	
Pay:							
Regulars.....				\$586,503.59		\$8,439,113.37	
Civilians.....				7,852,609.78		2,212,895.70	
Subsistence.....				624,327.86	\$1,588,567.84	556,517.17	
Clothing.....				88,907.30	467,609.87	479,130.66	
Transportation.....				70,803.08	408,327.58	124,004.20	
Fuel and light.....				81,362.33	42,641.87	6,020,646.99	
Other Quartermaster supplies and services.....				3,508,446.47	2,512,200.52		
Total.....				12,812,960.41	5,019,347.68	17,832,308.09	

FINANCE AND ACCOUNTING DIVISION, COST-KEEPING BRANCH, OFFICE QUARTERMASTER GENERAL.

Civilian military training.

	Estimated, 1919.	Expended, 1917.
	Number.	Number.
Salaries: Clerks (6 months), at \$100 per month.....	30	20
Wages: Laborers (100 days), at \$2 per diem.....	60	40
Salaries.....	\$18,000.00	\$8,000.00
Wages.....	12,000.00	8,000.00
Other objects of expenditure:		
Subsistence.....	1,800,000.00	130,000.00
Fuel, forage, and camp equipment.....	54,000.00	78,000.00
Stationery.....	37,000.00	3,200.00
Transportation, persons and supplies.....	339,000.00	540,000.00
Clothing and equipage.....	900,000.00	500,000.00
Water supply.....	37,000.00	65,000.00
Textbooks and printing.....	15,000.00	22,000.00
Camp sites.....	8,000.00	8,000.00
Kitchens and mess shelters.....	137,000.00	113,000.00
Crude oil, lime, etc.....	15,000.00	9,000.00
Removal of garbage.....	24,000.00	12,000.00
Candles, matches, and soap.....	4,000.00	3,000.00
Blank forms.....	1,000.00	800.00
Miscellaneous expenditures.....	28,000.00	
Total.....	3,378,000.00	2,000,000.00

Funds furnished disbursing officers of the Quartermaster Corps from appropriation
"Civilian military training camps," 1916-17.

For purposes of the appropriation at the following places:	
Omaha, Nebr.....	\$2,050.00
Laredo, Tex.....	577.92
Central Department.....	393.12
Philadelphia, Pa.....	12,565.76
Central Department.....	3,000.00
Southern Department.....	10,000.00
Eastern Department.....	3,000.00
New York, N. Y.....	31.40
Eastern Department.....	100,000.00
Washington, D. C.....	2,197.50
Atlanta, Ga.....	25,000.00
Fort McPherson, Ga.....	50,000.00
Fort Oglethorpe, Ga.....	15,000.00
Fort Snelling, Minn.....	35,000.00
Fort Sheridan, Ill.....	160,000.00
Madison Barracks, N. Y.....	34,000.00
Fort Oglethorpe, Ga.....	30,000.00
Fort L. H. Roots, Ark.....	50,000.00
Indianapolis, Ind.....	14,282.30
Central Department.....	4.50
Western Department.....	4,327.52
Fort McPherson, Ga.....	75,000.00
Southern Department.....	182,500.00
Omaha, Nebr.....	696.30
Fort Riley, Kans.....	22,000.00
Eastern Department.....	25,000.00
Plattsburg Barracks, N. Y.....	150,000.00
Fort Oglethorpe, Ga.....	132,532.50
Fort Niagara, N. Y.....	10,298.22
Fort Sheridan, Ill.....	75,000.00
Southern Department.....	20,000.00
Washington, D. C.....	17,161.00
Fort Logan, Colo.....	75,000.00
Fort Benj. Harrison, Ind.....	50,000.00
Washington Barracks, D. C.....	19,000.00
Fort McPherson, Ga.....	947.50
Fort Sheridan, Ill.....	96,098.00

poses of the appropriation at the following places—Continued.

New York, N. Y.	\$74,772.66
Madison Barracks, N. Y.	50,000.00
Presidio of San Francisco, Cal.	38,896.80
Fort Oglethorpe, Ga.	227,350.00
Presidio of San Francisco, Cal.	7,321.56
Washington Barracks, D. C.	30,000.00
Fort McPherson, Ga.	437,500.00
St. Louis, Mo.	2,990.23
Plattsburg Barracks, N. Y.	130,028.00
Eastern Department.	9,000.00
Argenta, Ark.	39,149.47
Jeffersonville, Ind.	10,056.39
Omaha, Nebr.	274.02
Eastern Department.	1,304.60
Fort Snelling, Minn.	76,250.00
Fort Benj. Harrison, Ind.	119,450.07
Fort Logan, Colo.	20.79
Fort Benjamin Harrison, Ind.	250,000.00
Fort Riley, Kans.	50,000.00
Fort Oglethorpe, Ga.	1,979.13
Central Department.	7,847.83
Washington, D. C.	10,361.30
Madison Barracks, N. Y.	25,000.00
Central Department.	10,000.00
Southern Department.	45.90
Boston, Mass.	1,000.00
Western Department.	1,500.00
Syracuse, N. Y.	25.00
Fort Myer, Va.	93,500.00
Des Moines, Iowa.	232,000.00
Fort Leavenworth, Kans.	10,500.00
Western Department.	2,000.00
Plattsburg Barracks, N. Y.	12,123.96
Fort Niagara, N. Y.	75,000.00
Seattle, Wash.	42.69
St. Louis, Mo.	37.05
Sacketts Harbor.	7,500.00
Southern Department.	100.00
Central Department.	45,408.70
Plattsburg Barracks, N. Y.	25,000.00
Southern Department.	919.71
Argenta, Ark.	5,740.00
Fort Sheridan, Ill.	12,000.00
Jeffersonville, Ind.	37.22
Plattsburg Barracks, N. Y.	1,491.12
Seattle, Wash.	21.00
Fort Winfield Scott, Cal.	1,540.03
Western Department.	4,346.30
Southeastern Department.	81.87
Central Department.	14,500.00
New York, N. Y.	1,788.46
Fort Winfield Scott, Cal.	704.49
Fort Monroe, Va.	528.25
Central Department.	25,135.46
St. Louis, Mo.	4,317.48
Washington, D. C.	13.30
Portland, Oreg.	394.35
Southern Department.	84,337.80
Seattle, Wash.	.55
Fort Myer, Va.	2,296.82
Jeffersonville, Ind.	1,205.52
Washington, D. C.	500.00
Fort Monroe, Va.	106.66
Fort McPherson, Ga.	169.68
Washington, D. C.	11,157.89
Fort Sheridan, Ill.	56,687.33

For purposes of the appropriation at the following places—Continued.

New York, N. Y.....	\$18,040.51
Philadelphia, Pa.....	36,836.04
Jeffersonville, Ind.....	5.28
Fort Sheridan, Ill.....	8,500.00
Total.....	3,911,675.81

Funds furnished disbursing officers of the Quartermaster Corps to and including Nov. 30, 1917, from funds made available in the act approved May 12, 1917.

APPROPRIATION "CIVILIAN MILITARY CAMPS."

Scavenger service, lumber, pay of candidates, mileage, etc., Plattsburg Barracks, N. Y.....	\$215,800.00
Pay of clerks, officers, and laborers, purchase fans, etc., Fort McPherson, Ga.....	10,892.00
Quartermaster supplies, equipment, etc., Boston, Mass.....	4,500.00
Hire of clerks, etc., Charleston, S. C.....	11,280.00
Miscellaneous supplies and services, Fort Myer, Va.....	50,000.00
Fuel, lights, supplies, etc., Fort Oglethorpe, Ga.....	64,725.00
Subsistence, mileage, and camp equipment, Presidio of San Francisco..	120,000.00
Traveling expenses, Fort L. H. Roots.....	10,000.00
Sewer and lighting systems, repairs, etc., Fort L. H. Roots.....	13,260.00
Miscellaneous supplies and services, Western Department.....	3,000.00
Subsistence and pay of employees, Fort Snelling, Minn.....	80,820.00
Travel pay, Fort Leavenworth, Kans.....	1,000.00
Emergency purchases of supplies and hire of services, Fort Riley, Kans.	15,000.00
Travel pay, Fort Benjamin Harrison, Ind.....	75,000.00
Subsistence, Fort Benjamin Harrison, Ind.....	5,000.00
Miscellaneous supplies, Fort Sheridan, Ill.....	9,606.14
Subsistence, Fort Oglethorpe, Ga.....	163,000.00
Pay of candidates, Fort Oglethorpe, Ga.....	200,000.00
Travel allowances, Fort Oglethorpe, Ga.....	65,000.00
Hire of civilian labor, Fort Oglethorpe, Ga.....	5,000.00
Miscellaneous supplies and services, Fort Oglethorpe, Ga.....	7,052.00
Pay of candidates, Fort Monroe, Va.....	32,000.00
Miscellaneous supplies and services, Eastern Department.....	10,000.00
Miscellaneous supplies and services, Madison Barracks, N. Y.....	45,000.00
Subsistence, Washington Barracks, D. C.....	75,000.00
Miscellaneous supplies, Baltimore, Md.....	500.00
Subsistence, mileage, and expenses incident to maintenance of camp, Presidio of San Francisco, Cal.....	100,000.00
Miscellaneous expenses, Boise Barracks, Idaho.....	300.00
Subsistence, Fort Niagara, N. Y.....	23,250.00
Pay of laborers and civilian clerks, Fort Niagara, N. Y.....	2,000.00
Travel pay, Fort Niagara, N. Y.....	15,000.00
Miscellaneous expenses, Fort Niagara, N. Y.....	730.00
Miscellaneous supplies and clerk hire, Vancouver Barracks, Wash.....	400.00
Miscellaneous services, Fort Lawton, Wash.....	400.00
Hire of civilian clerks, Fort Porter, N. Y.....	1,000.00
Shelving, gun racks, and tables, Fort Myer, Va.....	3,500.00
Travel pay, Fort Myer, Va.....	20,000.00
Supplies and services, Fort Myer, Va.....	50,000.00
Hire of clerks, mileage, etc., Fort Monroe, Va.....	4,263.00
Miscellaneous supplies, Chicago, Ill.....	1,211.02
Subsistence, Washington Barracks, D. C.....	72,509.40
Subsistence, Fort L. H. Roots.....	10,000.00
Subsistence, Southern Department.....	2,000.00
Do.....	2,020.65
Miscellaneous expenses, Fort Sheridan, Ill.....	52,500.00
Construction work, small-arms' target, Plattsburg Barracks, N. Y.....	4,609.48
Miscellaneous supplies, St. Louis, Mo.....	1,500.00
Pay of candidates, San Juan, P. R.....	28,000.00
Subsistence, San Juan, P. R.....	2,250.00
Miscellaneous expenses, Leon Springs, Tex.....	500,200.00
Miscellaneous supplies, New York, N. Y.....	337.90

Miscellaneous expenses, Central Department.....	\$10,000.00
Miscellaneous expenses, Raleigh, N. C.....	1,226.79
Pay, civilian employees, Western Department.....	2,000.00
Transportation, candidates, Fort Benjamin Harrison, Ind.....	5,000.00
Miscellaneous expenses, Fort Benjamin Harrison, Ind.....	5,207.82
Subsistence, mileage, and expenses incident to maintenance of camps, Presidio of San Francisco, Cal.....	180,000.00
Pay of candidates, Fort Des Moines, Iowa.....	104,308.00
Travel pay, Mount Clemens, Mich.....	500.00
Miscellaneous expenses, Hawaiian Department.....	4,000.00
Subsistence, Fort Snelling, Minn.....	80,820.00
Travel pay, Fort Snelling, Minn.....	15,000.00
Purchase, trucks, tanks, etc., Fort McPherson, Ga.....	25,196.00
Miscellaneous expenses, Fort Oglethorpe, Ga.....	57,602.00
Subsistence, Fort Oglethorpe, Ga.....	100,000.00
Travel allowances, Fort Oglethorpe, Ga.....	56,000.00
Civilian clerks and laborers, Fort Oglethorpe.....	6,950.00
Miscellaneous expenses, Fort Oglethorpe.....	6,194.00
Fire apparatus, Fort Oglethorpe.....	1,028.00
Incinerator, Fort Myer.....	500.00
Miscellaneous expenses, mileage, Plattsburg Barracks, N. Y.....	312,400.00
Civilian employees, Jackson Barracks, La.....	600.00
Miscellaneous supplies, New York Depot.....	124.98
Miscellaneous supplies, Fort Douglas, Utah.....	13.85
Miscellaneous supplies, New York Depot.....	1.75
Miscellaneous expenses, school of military aeronautics, Atlanta.....	12,000.00
Miscellaneous expenses, Vancouver Barracks, Wash.....	900.00
Miscellaneous expenses, Central Department.....	15,000.00
Laborers, San Juan, P. R.....	200.00
Renovating clothing and equipage, Fort Myer, Va.....	7,000.00
Miscellaneous expenses, Fort Wood, N. Y.....	4,000.00
Temporary employees, Southern Department.....	230.96
Telephone poles, Fort W. H. Harrison.....	115.46
Miscellaneous expenses, Fort D. A. Russell, Wyo.....	128.10
Miscellaneous expenses, Washington Barracks.....	1,066.35
Miscellaneous supplies, Fort Douglas.....	27.75
Miscellaneous supplies and services, Henry Barracks, P. R.....	922.50
Subsistence supplies, Henry Barracks, P. R.....	3,080.00
Pay of laborers.....	100.00
Pay of stenographer and rental of typewriter, Fort Lawton, Wash.....	53.20
Miscellaneous expenses, Fort Wood, N. Y.....	2,000.00
Miscellaneous expenses, Fort Winfield Scott, Cal.....	1,262.90
Miscellaneous expenses, Fort Winfield Scott, Cal.....	1,306.83
Mileage, San Juan, P. R.....	400.00
Subsistence, San Juan, P. R.....	2,500.00
Two typewriters, San Juan, P. R.....	180.00
Subsistence supplies, Fort De Moines, Iowa.....	21,401.00
Clothing due on discharge, Fort Des Moines, Iowa.....	8,000.00
Travel pay, due on discharge.....	15,840.00
Subsistence supplies, Fort Niagara, N. Y.....	101,112.00
Pay of clerks and laborers, Fort Niagara, N. Y.....	2,000.00
Miscellaneous expenses, Fort Niagara, N. Y.....	870.00
Civilian employees, Southern Department.....	100.00
Miscellaneous supplies and services, Fort Myer, Va.....	30,000.00
Miscellaneous supplies and services, Madison Barracks, N. Y.....	100,000.00
Renovating blankets, etc., Madison Barracks, N. Y.....	2,750.00
Construction of bayonet field ranges, Fort Oglethorpe, Ga.....	588.23
Miscellaneous expenses, Fort Monroe.....	24,171.67
Miscellaneous construction, Leon Springs.....	5,125.00
Miscellaneous supplies, Henry Barracks, P. R.....	594.50
Subsistence supplies, Henry Barracks, P. R.....	4,000.00
Pay of laborers, Henry Barracks, P. R.....	200.00
Renovating clothing and equipage.....	470.00
Subsistence, Southern Department.....	42,000.00
Mileage, Southern Department.....	673.34
Transportation accounts, Washington, D. C.....	120.00

Subsistence, Southeastern Department.....	\$1,300.00
Cleaning equipage, Fort Sheridan, Ill.....	6,603.80
Subsistence, Fort Sheridan, Ill.....	37,500.00
Civilian employees, Fort Sheridan, Ill.....	8,216.00
Miscellaneous supplies, Fort Sheridan, Ill.....	5,263.72
Pay of candidates, San Juan, P. R.....	20,000.00
Miscellaneous supplies, New York depot.....	990.00
Motor truck, Fort McPherson, Ga.....	1,787.87
Subsistence supplies, Honolulu, Hawaii.....	5,000.00
Hand grenades, Fort Snelling, Minn.....	211.00
Subsistence, Fort Snelling, Minn.....	102,000.00
Temporary employees, Fort Snelling, Minn.....	11,640.00
Repairs to automobiles, Fort Snelling, Minn.....	33.80
Miscellaneous expenses, Fort D. A. Russell.....	16.85
Construction of trenches, Fort Leavenworth.....	1,500.00
Travel pay, Fort Leavenworth.....	1,500.00
Subsistence, Fort Oglethorpe, Ga.....	60,000.00
Travel pay, Fort Oglethorpe, Ga.....	35,000.00
Pay of civilians, Fort Oglethorpe, Ga.....	10,500.00
Miscellaneous supplies and services, Fort Oglethorpe, Ga.....	16,450.00
Miscellaneous expenses, Eastern Department.....	5,000.00
Subsistence supplies, Henry Barracks, P. R.....	1,420.00
Miscellaneous supplies and services, Henry Barracks, P. R.....	420.00
Miscellaneous expenses, Fort Logan H. Roots.....	288.00
Travel pay, Fort Myer, Va.....	5,000.00
Miscellaneous supplies and services, Fort Myer.....	30,000.00
Supplies and services, Fort Riley, Kans.....	3,000.00
Miscellaneous supplies, New York depot.....	240.00
Subsistence, Champagne, Ill.....	9,900.00
Travel allowances, Fort Winfield Scott.....	5,000.00
Miscellaneous expenses, Fort Wood, N. Y.....	2,000.00
Miscellaneous supplies and services, Fort Monroe.....	806.07
Travel pay, Fort Monroe.....	30,000.00
Civilian employees, Fort Monroe.....	1,348.34
Miscellaneous supplies and services, Western Department.....	116.00
Civilian employees, Western Department.....	600.00
Miscellaneous supplies and services, Vancouver Barracks, Wash.....	650.00
Miscellaneous expenses, Mineola, N. Y.....	229.66
Subsistence, Fort Des Moines, Iowa.....	10,000.00
Travel pay, Fort Des Moines, Iowa.....	9,545.57
Civilian employees, Southern Department.....	100.00
Miscellaneous expenses, Southern Department.....	4,945.02
Subsistence, mileage, and expenses incident to maintenance of camp, Presidio of San Francisco.....	250,000.00
Transportation accounts, Washington, D. C.....	1,000.00
Subsistence, Fort Niagara, N. Y.....	10,000.00
Travel pay, Fort Niagara, N. Y.....	5,000.00
Transportation, Fort Niagara, N. Y.....	5,000.00
Clerks and laborers, Fort Niagara, N. Y.....	2,000.00
Miscellaneous supplies and services, Fort Niagara.....	31,189.54
Temporary employees, Fort Snelling, Minn.....	15,137.66
Miscellaneous expenses, Central Department.....	10,000.00
Do.....	6,057.31
Travel pay, Fort Sheridan, Ill.....	40,000.00
Civilian employees, Fort Sheridan, Ill.....	6,000.00
Miscellaneous supplies, Fort Sheridan, Ill.....	175.02
Supplies, Fort Douglas, Utah.....	50.00
Renovation of clothing, Fort Oglethorpe, Ga.....	8,000.00
Civilian laborers and clerks, Fort Oglethorpe, Ga.....	8,000.00
Miscellaneous supplies and services, Fort Oglethorpe.....	33,300.00
Miscellaneous supplies, Fort Leavenworth, Kans.....	400.00
Miscellaneous supplies and services, Fort Myer, Va.....	10,030.00
Miscellaneous supplies and services, Fort Oglethorpe, Ga.....	6,500.00
Purchase and installation of transformers.....	400.00
Construction temporary shelter, Fort Niagara.....	10,000.00
Miscellaneous expenses, Fort Oglethorpe, Ga.....	8,901.10
Total.....	4,499,841.43

furnished disbursing officers of the Quartermaster Corps, to and including Nov. 30, 1917, from funds made available in the act approved June 15, 1917.

APPROPRIATION "CIVILIAN MILITARY TRAINING CAMPS."

hed for purposes of the appropriation at the following places:

rt Leavenworth, Kans.....	\$5,000.00
genta, Ark.....	25,000.00
epot quartermaster, San Francisco, for supplies furnished.....	2,163.70
epot quartermaster, New York, for purchase of automobiles....	180,345.99
esidio of San Francisco, Cal.....	72,742.56
ort Niagara, N. Y.....	52,828.44
acksonville, Fla.....	150.00
attsburg Barracks, N. Y.....	50,000.00
ort Sheridan, Ill.....	35,000.00
ashington Barracks, D. C.....	24.00
olumbus Barracks, Ohio.....	416.60
astern Department.....	209.07
ineola, Long Island.....	3,800.00
ancouver Barracks, Wash.....	400.00
ort Douglas, Utah.....	58.33
ort Logan H. Roots, Ark.....	500.00
harleston, S. C.....	2.40
ort Leavenworth, Kans.....	173.96
harleston, S. C.....	29.56
hicago depot for purchase of automobiles.....	10,700.02
ransferred to appropriation Civilian Military Training Camps, 1916-17, for appropriation adjustment.....	3,000,000.00
Total.....	3,439,544.63

he CHAIRMAN. The next item is under the heading "Reserve
ps," and the item is for "quartermaster supplies, equipment, etc.,
erve Officers' Training Corps, \$2,135,671." The amount appro-
ted last year was \$4,385,000, so that you are asking now for less
a half the amount you got last year.

ol. DALY. The principal expenditure under that item is for com-
ation of subsistence to the students of the senior grade, author-
l in the act of June 3, 1916, and extended by a subsequent act.

he CHAIRMAN. You will put a statement in the record showing
ctly the items you want for next year's appropriation, and also
tatement showing what you have expended on the last year's
ropriation, and the balance on hand.

ol. DALY. Yes, sir.

The details are as follows:)

Quartermaster supplies, equipment, etc., for Reserve Officers' Training Corps.

Objects of expenditure.	Estimated, 1919.	Expended, 1917.
umutation of rations, 9,700 students 334 days, at 35 cents per day each...	\$1,239,175	\$2,620,000
istence, 10,000 students in camp and en route, 32 days, at 35 cents per ay each.....	112,000	316,500
il in camps, 10,000 students, 30 days.....	4,000	13,300
ht in camps.....	2,000	6,200
ot of camp sites.....	6,000	8,000
s and kitchen shelter.....	31,393	228,000
isportation, personnel and equipment.....	28,500	115,000
e of teams.....	4,000	6,000
rage for animals.....	6,000	13,000
iforms and equipage.....	690,000	580,000
ster supply.....	4,000	8,000
ationery and forms.....	1,000	3,800
pairs, replacements, and maintenance.....	7,600	16,300
Total.....	2,135,671	3,934,100

Funds furnished disbursing officers of the Quartermaster Corps to and including Nov. 30, 1917, from funds made available in the act approved May 12, 1917.

APPROPRIATION "QUARTERMASTER SUPPLIES, EQUIPMENT, ETC., RESERVE OFFICERS' TRAINING CAMPS."

Subsistence, Newark, Del.....	\$204. 60
Clothing, Newark, Del.....	2, 044. 00
Subsistence, Virginia Military Institution.....	465. 60
Clothing, Virginia Military Institution.....	675. 51
Purposes of the appropriation, Mount Clemens, Mich.....	25, 000. 00
Clothing, Agricultural College, Utah.....	3, 045. 00
Subsistence, University of Iowa.....	82. 80
Clothing, Stanford University, Cal.....	5, 460. 00
Purposes of the appropriation, University of Tennessee.....	6, 500. 00
Purposes of the appropriation, Ithaca, N. Y.....	8, 000. 00
Subsistence, Oregon Agricultural College.....	414. 00
Clothing, Oregon Agricultural College.....	5, 520. 00
Purposes of the appropriation, University of Nevada.....	171. 00
Subsistence, Clemson College, S. C.....	10, 402. 20
Clothing, Clemson College, S. C.....	8, 414. 00
Subsistence, South Dakota State College.....	285. 48
Clothing, South Dakota State College.....	1, 470. 00
Subsistence, University of California.....	3, 100. 00
Clothing, New Mexico Military Institute.....	3, 766. 00
Subsistence, Ohio State University.....	1, 849. 20
Clothing, Ohio State University.....	938. 00
Purposes of the appropriation, Marion Institute, Ala.....	4, 200. 00
Total.....	32, 007. 39

Funds furnished disbursing officers of the Quartermaster Corps to and including Nov. 30, 1917, from funds made available in the act approved June 15, 1917.

APPROPRIATION "QUARTERMASTER SUPPLIES, EQUIPMENT, ETC., RESERVE OFFICERS' TRAINING CAMPS."

Subsistence, University of Florida.....	\$279. 00
Forage for Yale Battery, Boston.....	2, 400. 00
Subsistence, Virginia Military Institution.....	3, 590. 86
Clothing, Virginia Military Institution.....	4, 858. 00
Purposes of the appropriation, University of Florida.....	22. 50
Purposes of the appropriation, Rutgers College, N. J.....	297. 60
Purposes of the appropriation, Rutgers College, N. J.....	231. 00
Clothing, State Agricultural College, Colo.....	10, 396. 23
Subsistence, State Agricultural College, Colo.....	199. 80
Total.....	22, 274. 99

MILITARY EQUIPMENT OF SCHOOLS AND COLLEGES.

The CHAIRMAN. The next item, on page 75, is "Quartermaster's supplies for military equipment of schools and colleges, \$84,505." Will you put in the record a statement in regard to this item similar to the one you put in in regard to the preceding item?

Col. DALY. Yes, sir. If the same provision is made in the case of this item, we will not need this money. We have a sufficient balance under last year's appropriation, if that balance is made available for the fiscal year 1919.

Objects of expenditure.	Estimated, 1919.	Expended, 1917.
Shelter tents, poles, and pins.....	\$54, 000. 00	\$30, 000. 00
Heavy tentage and camp equipment.....	27, 000. 00	12, 000. 00
Transportation charges.....	3, 505. 00	2, 000. 00
Total.....	84, 505. 00	44, 000. 00

(Thereupon, the committee adjourned to meet Monday, January 21, 1918, at 10.30 a. m.)

ARMY APPROPRIATION BILL, 1919.

COMMITTEE ON MILITARY AFFAIRS,
HOUSE OF REPRESENTATIVES,
Tuesday, January 8, 1918.

The committee this day met, Hon. S. Hubert Dent (chairman), presiding.

The CHAIRMAN. The Secretary of War requested me to give a hearing this morning to Gen. Richardson, in reference to the Alaskan items in the bill, inasmuch as Gen. Richardson has been ordered to Camp Lee.

STATEMENT OF BRIG. GEN. W. P. RICHARDSON, ACCOMPANIED BY MAJ. J. C. MEHAFFEY.

The CHAIRMAN. General, I believe the only Alaska item in the bill is on page 47, for "Construction, repair, and maintenance military and post roads, bridges, and trails, Alaska: For the construction, repair, and maintenance of military and post roads, bridges, and trails, Territory of Alaska, \$100,000." You had \$500,000 last year?

Gen. RICHARDSON. Yes, sir; that was made available for two years, and is available until June 30, 1919.

The CHAIRMAN. How much of that amount have you expended?

Gen. RICHARDSON. There will be available of that amount about \$150,000 for field work next year. That covers the overhead expenses for this winter, and certain purchases and shipments of supplies. I could not give you the exact amount that is expended to date, but we have worked it out in the way I explained. I would like to explain to the committee that this additional estimate of \$100,000 was put in because of the increased cost of labor and supplies, generally, in addition to the \$500,000 appropriated last year, and made available for two years. The Secretary of War wished me to explain that to the committee, and also the conditions that exist and anything the committee would like to know in reference to the reasons for asking for this additional amount.

I note the appropriation says, "Construction, repair, and maintenance." I would suggest, Mr. Chairman, if you think it proper, that the word "construction" be eliminated, as this money is entirely for repair and maintenance, and that will, as I understand it, not make the item subject to a point of order, which was raised against the item last year.

You may remember, Mr. Chairman, that the Secretary of War, anticipating a further hearing in reference to this item when the Congress reconvened after the 4th of March, wrote a letter in which he stated that in case the entire appropriation should be granted, he would not submit further estimates for the extension of this work unless specifically authorized to do so, because it would mean that

the old question would be brought up again, and a point of order raised against the item on the floor of the House. I am familiar with that letter, and with the reasons for it, and I wanted to explain that the Secretary, anticipating a further hearing, had written that letter to you, Mr. Chairman.

In pursuance of that same policy, this estimate was approved only because of the conditions which confronted us, in reference to the increased cost of labor and materials, and this estimate is only for \$100,000, to cover that increased cost.

It is badly needed, I can assure you, and with the amount appropriated last year and this additional amount, we will try to bring to as near a degree of completion as possible the roads that are being constructed, the work already laid out. Of course, the roads are never actually completed.

The CHAIRMAN. You think the \$500,000 that has been appropriated and made available for two years, with this additional amount of \$100,000, to cover the increased cost of material labor, will be sufficient? You are asking for this increased amount, only because of the increased cost of labor and material?

Gen. RICHARDSON. Yes, sir. I was detailed to take charge of this work and given the responsibility for it, and I have tried to make good on it. It has been a very difficult matter. There is a great wilderness in Alaska, with no roads or trails, and we started in with that condition confronting us. I am not responsible for the law, nor for being detailed on that work, and I have come before the committee to state the conditions as to what is needed. If that country needs any help in the world, it needs it in the way of wagon roads and trails. The railroad is all right, but it will be a good many years before it will pay its operating expenses. Congress will have to appropriate large sums of money to support that line of railroad. It will take a vast extension of roads and trails to act as feeders for the railroad before it can be made to pay. I am not responsible for that, nor am I seeking money to build feeders for the railroad, but to complete the work, as far as possible, or at least to get to as nearly a full degree of completeness as is possible the work that has already been laid out, and which is under course of construction.

My annual report gives a very brief history of the operations of the board and it states the conditions that exist now, and there is also a statement from the engineer officer covering the engineering features, the engineering difficulties, and there are also some small maps.

I wish to state further, Mr. Chairman and gentlemen of the committee, that there has been a new organization formed to take charge of this work, composed of officers who have been specially selected and commissioned in the Engineer Reserve Corps, the senior of whom is Capt. Waugh, who comes from the Bureau of Public Roads of the Department of Agriculture as a skilled highway engineer, and who has had a good deal of experience in road building. I believe they are competent to continue the work.

His two assistants are men who have been trained with our board, and I have been relieved from that duty, and the work has now been placed under the general direction of the Chief of Engineers of the Army by order of the Secretary of War, and I speak in behalf of that

for the future. I hope the committee, which has been generous in its appropriations for this work, will see its way clear to give support to the work in the future as liberally as it has in the past. reputation and the credit of the department and the commission concerned in this work, and I believe it to be of vast importance to the Territory. If the Territory needs anything, if there is any way in which the Government can help the Territory more than in the past, it is in completing the pioneer roads and trails.

My whole purpose in coming before the committee this morning was to explain the reason why this \$100,000 appears in this estimate, when \$500,000 was appropriated last year and made available for two years.

I hope the committee will grant the additional appropriation. I wanted to explain the present status of the work and what its future will probably be. I think the War Department is the best agency of the Government to undertake work of that kind in a business country like Alaska. Alaska will be a wilderness for a number of many years to come.

We have, at the present time, one very good road from Valdez to Fairbanks. It needs surfacing, and further improvements. That road is 400 hundred miles and over in length, inclusive of the branch to the Pitmeena. Automobiles travel over that road, but we do not encourage them, because we have no money to make an automobile road.

They have covered that distance in 24 hours running time. That road crosses two mountain ranges, and a number of streams, which have been bridged, except two across which there are rapids, and the people get a great deal of benefit from it. All the mail is transferred over that road.

If the War Department were to relinquish control over that road, it would go to pieces, because there is no other agency to look after that road which reaches from the coast to Fairbanks, and we are going to get it completed so that it will stand up against the conditions of the country which it serves, and that is the principal work we have been doing.

TILSON. Are there any other agencies, local road districts, or municipalities, or any agency of that kind along the line of that road that can take up this work on the civil side, if it should be transferred by the War Department?

MR. RICHARDSON. No, sir.

TILSON. I suppose the character of construction is such that it would rapidly deteriorate if it were not made safe from year to year by some agency of the Government.

MR. RICHARDSON. Yes, sir; that is true. It requires constant attention and care to protect that road against the flood waters, especially during the summer, due to the melting snow in the mountains.

TILSON. Then it is your opinion that it would be wise, on the part of the Government, through the War Department, which you consider the best agency to keep up this road, to continue to provide support?

MR. RICHARDSON. Yes, sir, I do. I have recommended in my last report that in case the work should be transferred in the near future, that the local roads, of which there are many all over the Territory—that the local roads be turned over to the Territorial organi-

zation. They have an organization which was established recently, and as soon as it is in working order they might take charge of the local roads.

Mr. TILSON. But it is the main arteries that you refer to particularly that have no local municipalities or road districts to take care of them?

Gen. RICHARDSON. Yes; they have no such agencies to take care of them. This road passes through an absolute wilderness country; there is nothing along the road except the roadhouses here and there.

The CHAIRMAN. As I recall the point of order made against this item, it was that the law authorizing the construction of these roads requires that the expense should be borne out of certain revenues received in the Territory of Alaska. How much revenue do you get?

Gen. RICHARDSON. Our revenues from the Territorial fund, which is a tax fund collected outside of the incorporated towns, has averaged nearly \$150,000 a year, and while these two funds, the fund received from the Territory and the amount appropriated by Congress, have been used interchangeably, Congress has made our appropriation in a lump sum. We have adhered as closely as we could to the principle of using this tax fund for local road construction, and the special appropriation made by Congress for these main lines of travel, of which the one I have referred to is the chief. That is the route of mail communications clear through this Territory, from the coast of Valdez up to the town of Nome, on Bering Sea. It is a wagon road to Fairbanks, and it goes clear through that country. It is used not only for the transportation of the mails, but for the support and maintenance of the telegraph line. This is the main line of communication, and that telegraph line is the lifeblood of the Territory, and has been for 10 years, and this road is its main support.

Mr. KAHN. It is a military road?

Gen. RICHARDSON. It was with that purpose in view that the estimate was originally approved. It has gone on from year to year. I have endeavored to get the law amended so that it would not be subject to a point of order, but it has remained in its first form.

Mr. GREENE. Is the expense of the maintenance of this particular piece of highway more than the normal expense of roads to be found elsewhere, because of the melting snow in the spring?

Gen. RICHARDSON. Yes, sir; we have never been able to complete the road entirely. We have improved it from a trail to a passable route, and people are traveling over it all the time. We could not keep them off, because there are no other places to go to, and so the maintenance has been intermingled with the construction, and the maintenance will be rather high, for a time at least.

Mr. GREENE. Is it not rather incident to the climate that all road construction is susceptible to a higher rate of maintenance there because of the fact that in the spring conditions become unfavorable on account of the going out of the frost, and that happens to a far greater degree than people in more genial climates appreciate?

Gen. RICHARDSON. Yes, sir; that is true.

Mr. GREENE. That would account for the unusual burden on the public to maintain such a highway.

Gen. RICHARDSON. Yes, sir; the Territorial Government is not able to do it. They have done very well, as far as they could. The

ory is aiding by means of special appropriations in addition to tax fund which I mentioned, and I think the Territory is doing are in the work.

KAHN. Has the cost of labor and materials increased during last year?

1. RICHARDSON. We had to increase our wages about 18 per cent.

KAHN. Is labor plentiful up there?

1. RICHARDSON. It has been up to this year.

KAHN. You have had a scarcity recently?

1. RICHARDSON. Yes, sir.

KAHN. Is there any likelihood of any still further increase in the labor this year?

1. RICHARDSON. No; I think not.

KAHN. How much do you pay for laborers on the road up

1. RICHARDSON. It varies in different sections, all the way from a day and board—we furnishing the board—up to \$4.50 a day and board.

KAHN. What character of labor do you get?

1. RICHARDSON. It is white labor, and very good.

KAHN. You can get those laborers for \$2.50 a day and board?

1. RICHARDSON. That is the lowest. I do not believe we have ever as low as that now; I think the lowest is \$3 now.

OLNEY. How does the cost of living there compare with the cost of living here?

1. RICHARDSON. The cost of living is not so very high; I mean that belt running up from Seattle. That is open all the year round and the towns are supplied, and the cost of living is not much greater than it is along Puget Sound. As soon as you get into the interior it mounts up. The further away you get from transportation the greater the cost of living becomes.

OLNEY. When you are going across this country you have to pay \$2 for a meal, for every day you get; it does not make any difference what you get to eat. That is the interior that is about the average cost. Of course, when we get to the men in those sections of the country it costs us a good deal.

OLNEY. A laborer getting \$2.50 or \$3 a day can not afford to eat many meals at \$2 a piece.

1. RICHARDSON. No, sir; \$3 is the lowest we are paying now, and that is the cost of labor in that country.

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ARMY APPROPRIATION BILL, 1919.

COMMITTEE ON MILITARY AFFAIRS,
HOUSE OF REPRESENTATIVES,
Monday, January 21, 1918.

The committee met at 10.30 o'clock a. m., Hon. S. Hubert Dent (man) presiding.

TESTIMONY OF MAJ. GEN. GEORGE O. SQUIER, CHIEF SIGNAL OFFICER, ACCOMPANIED BY COL. E. A. DEEDS AND COL. H. ARNOLD, SIGNAL CORPS.

THE CHAIRMAN. General, the first item for your department, on 7 of this bill, under the heading, "Office of the Chief Signal Officer," is "Signal Service of the Army: For expenses of the Signal Service of the Army, \$1,138,240,314.57." At the last session you given under this item practically \$740,000,000. You were given \$640,000,000 in one bill for air craft, and then in other appropriations you were given practically \$100,000,000 more. I think, perhaps, it will be the most orderly way to proceed for you to first give us a general statement of the expenditure of that amount of money, what you have accomplished so far by the use of that money, then explain why you need this extra billion dollars.

MR. SQUIER. As the chairman has stated, we received at the last session of Congress, roughly, \$740,000,000, of which \$694,000,000 was aviation. The special bill signed on July 24 gave us an appropriation of \$640,000,000, and other bills made the total what the chairman stated.

Along with that first bill this committee very wisely gave us authority to administer and to develop, gave us a personnel, without which I am sure, gentlemen, it would have been perfectly impossible to have accomplished what we have.

You cannot take a quantity of money of that amount, involving that that involves, without carrying with it a wide authority, together with personnel to administer it.

I think the best way to put it would be to say that we have expended all of that money and more, and we will submit a deficiency report for a considerable amount, probably very soon—surely by April 1, when the amount estimated for in this bill will become available. The exact amount of deficiency the Secretary of the War is informed about, and, of course, also the President. An exact financial statement of such a large amount as that, including such expenditures as we have to meet, would require a special session of the committee for explanation, and I suggest that perhaps later, if the committee desire, I will have the head of the finance division explain exactly how this amount has been spent.

THE CHAIRMAN. For the record.

MR. SQUIER. I could not possibly do that in the way it should be done. We have spent or obligated that amount of money, and

more than that, and we are now disbursing probably something like \$50,000,000 a month on the deliveries that have already been contracted for under the provisions of that bill. That is a vast amount of money. It has involved, in the first place, an organization to carry out the provisions of the bill, which I might very well describe to you.

I may say in behalf of the committee that their broad-gauge action in securing the passage of that bill has been primarily responsible for enabling the War Department to accomplish what it has. If the bill had not been passed, it would have been a total impossibility to have done what has been done, particularly if it had not carried the unusual terms which were included in it.

The first thing we had to do was to organize the personnel to carry out this program. You will remember that we had some money before this big bill was signed on the 24th of July. We hypothesized on that action in a way, however, because war had been declared in April. We looked over the field immediately, determined what the military necessity was, and laid our plans in a large way, predicated on what we thought this committee and Congress would do.

So, long before we had a large amount of money, or anything that would enable us to go ahead just as if we had the money in hand, we laid our plans in a rather broad way.

Before the 1st of June we had carefully surveyed the technical problem of creating our industry in this country, and had come to the conclusion that we had to rely upon ourselves to produce a new kind of engine, since the engine is the main part of a flying machine.

By the 1st of June we had pretty thoroughly investigated the European situation. We found 30 or 40 different kinds of engines in England, and many more in France, with almost impossible methods of construction, with spare parts by the thousand that nobody could hope to get in quantity, and we had to make a big decision. I doubt if we will ever make as big a decision again.

We made the decision, and I think we made a right decision, as I can prove to you. We could have brought over their engines from Europe, but we would not have had as many real engines by this time. It would have been absolutely the wrong thing to have done.

As soon as war was declared, as Chief Signal Officer, I asked that the best aviation officers of our allies be sent immediately for duty in my office, for the purpose of advising us. So, within two or three weeks after war was declared, I had in my own office a number of the most expert flying officers of England, France, and later of Italy. At this moment I have something like 30 officers, picked officers of all nations allied with us, and they are helping us very materially in our aviation work.

Manifestly, that was the only thing to do, because the war was being fought in Europe, and that is where you get the experience, and we had to have and to know the best. So we have those officers here in our office, and they advise us constantly what to do.

We also sent officers to Europe, commissions of our own people to advise us from that end. We established strong missions of Army and Navy officers in Paris and London, so that we are in daily communication with them, both ways.

In addition to that, we have experts on every boat that sails, both to keep us informed. That gives us an organization so that we can continue to know from day to day and from week to week, what to do. We are thus in daily consultation with the different countries. Cablegrams are received every day from our own people at home, and by the officers of other countries who are here working for us.

Our machinery enables us to follow as nearly as possible the development of aircraft on the different fronts. I think you will be amazed when I say that the development of aircraft in this war has been so kaleidoscopic since I was last before you, that the planes which the joint Army and Navy technical board had planned to put on the Western front as fighting planes, and those we have finally produced are entirely different.

Even, last July, had jumped in and made the planes in the way planned, they would have been out of date by this time.

I merely mention that to show you how this situation has developed, and want you to understand the machinery we have organized to keep in touch with the actual fronts, in order not to do the wrong thing and we do that both ways, through the experts of the enemy countries, and through our own people in Europe. As a matter of fact, Mr. Chairman, I have an International General Staff in office of trained expert designers of planes. We have the best bomber designer from France. In addition to that, we have our missions in London and in Paris, besides that we have our agents carrying information to us. So much for our system for finding out what has been and is being done.

We have made a decision about the engine. You have probably read the history of the Liberty engine, and despite what you may hear by the underground method, the motor is a great success. I think it will go down into history as one of the great achievements of industry either of this time or any other time.

You know pretty well the story of the Liberty motor. It has already been given out by the Secretary of War. We are going to

I may say, in Europe, with perhaps the only high-powered engines that our allies will have in quantity this season.

MR. TILSON. Will you tell us something of the trial performances of that engine in this country, as far as that information has been given?

We are often asked what is the Liberty engine doing. Can you give us the information that will enable us to answer that question?

MR. SQUIER. My attitude, gentlemen, toward this committee in regard to my appearance here, is this: I do not think there is anything I should not tell the Military Committee of the House in absolute frankness, realizing that we are here in a war, and absolutely in honor. I am prepared to show you everything we have done, up to what we have done in France, with the distinct understanding which I wish to impress on everyone who may hear it, that the least hint outside may be a danger.

MR. CHAIRMAN. The method we have adopted in regard to this is to try to get the facts in executive session, leaving it to the officials of the War Department, when they blue pencil the hearings, to strike out whatever ought not to be printed.

Gen. SQUIER. The Liberty motor has been tested since it was started in every conceivable kind of way—probably more than any other piece of machinery ever has been. The last plan adopted in the way of testing the motor was to have some entire outsiders, who had never had anything to do with it, give it the most severe tests that they could think of. We are having them make those tests for fear that the people interested might possibly be prejudiced in their judgments.

The real story of the Liberty motor, and every step that has been taken in connection with it, can be better told by Col. Deeds than by me, if you wish to know every detail in regard to it, but I will furnish you all the test performance curves, if you wish.

It has been tested already in planes, on top of Pikes Peak, and by means of special arrangements that have been made to simulate higher altitudes. It has been flown in every conceivable position, both in planes made in this country and those made abroad, and it has been given every conceivable sort of test to which the best ingenuity and brains could put it, and has not only come up to them all, but is better than anybody expected. We have had some changes made in it; indeed, there have been quite a number of changes since the first one was made.

Gen. SQUIER. Of course, Mr. Chairman, in a program of this magnitude the great point is to synchronize the different elements of your entire program, so that you may be sure that each of the elements will fit in its proper place, that you have not all engines and no planes or that you have not both planes and engines and no men to run them, or that you have all three of those and no radio to put on the machine. A vast program of this sort must be synchronized in each of its activities, month by month, with every detail matched up.

All of the things that go with this machine, and that are a part of it, are equally important. All of these things had to be thought of; so months ago we started in to get the materials and do the work which would be required to match them up.

Early in the program we had to have what we called a planning section, a section composed of people who had nothing to do but to plan, to look ahead 30 days or 60 days or 90 days, all the time, with a staff of statisticians. We had to do that because everyone with a special job is so busy with his own particular job that he has not the time to see the whole. So we have these people whose business it is to do nothing else but look ahead and plan.

I will not say more about the Liberty engine, other than to say that we will be glad to give you all the data we can get on it, whenever it is necessary.

The Liberty engine is the backbone of our program, and it is the backbone of the Navy program. It has been put on one or two naval boats, and our fighting machines which are to go to Europe, to be added to the machines that are already there. I may also say that from the word that we get our allies will take all the Liberty engines we can spare.

I consider that engine one of the greatest successes we have ever had, and I believe it to be so, despite what you will hear to the contrary. There is a paid propaganda, we believe, that is throwing

mud at the Liberty engine. You will hear all sorts of underground stories about its being a failure, saying that it will not work. Very likely it is German propaganda.

We proceeded with the Liberty engine, to standardize it as never an engine has been standardized before, which means that we can produce it in quantity. We are accused at times of having standardized so far that we have killed initiative, and I wish to clear that up.

I think I can safely say that every engineer of standing in this country, or every engine designer of standing who has passed the scrutiny of our staff, is now engaged in making some sort of a new engine or plane, because we realize that in the air, perhaps more than anywhere else, we have got to do new things. We are on the threshold of tremendous developments in the air, and there is more experimenting going on than ever before in this country, and probably more than there ever was in any other country. We turn away nobody who has any new ideas, although we are frequently accused of doing so.

The fighting planes that were recommended by our joint technical committee of the Army and Navy last July, when I was before you, have been superseded, and the estimates I made then do not apply now. If we had made those planes on the basis of the estimates that I presented to you at that time, the planes would have been out of date.

Fortunately, we did not start in to make fighting planes the first thing, because we did not know how to make planes. There was only one factory that was making them, and that was subsidized by the British.

When we finally decided upon the plane that we should make, it was after a most careful study of all the European planes, bringing them over here bodily, with the engines of the planes both of our allies and the Germans, and we claim that our standard fighting plane, which will come into production this month and increased production from then on, will be the finest fighting plane. So, instead of going to Europe with something that was out of date we will be in the van. As I have shown we have the only high power engine available in quantity.

In regard to the other things that go on the plane, we must have machine guns, we must have radio, and we must have cameras in large quantities, and all these things must be matched up, and their production synchronized with the production of the planes. That has meant the starting of vast industries.

In regard to the cameras, you all know that the maps of the front are all made by photographs pieced together very carefully, day by day. It is marvelous what the camera has accomplished for it is only by its use that you can tell what has been done by the enemy. The planes are sent up with cameras, photographs taken of the enemy lines to show what the enemy has done during the night, and the commander can map out his plans with that picture before him. That requires a tremendous development both of personnel and materials. It was a most important subject for us to work out and we secured the very best men we could get in the country. That branch of the work has been synchronized with the rest of it. So

far as the radio is concerned also, there have been very many important developments.

The personnel side of the situation had to be taken into consideration very seriously, of course, and had to be synchronized with the equipment. If we have planes and did not have American boys trained to fly them, the program would be a failure. So plans had to be laid, months ago. They were made under the provisions of the wise law you gave us, without which it would have been impossible to have taken a step toward the training of the youth of this country for the air service.

The type of youth we wanted was the finest that the country could produce.

To save time, the young man should be trained first in certain essentials, without any flying machine at all and for the purpose of saving the expense of going to a school where flying is going on. So we summoned to Washington last May the presidents of universities and certain engineering schools, and asked their cooperation in establishing the ground schools where the student is first sent. They cooperated loyally, and eight schools were selected. They are located at the Massachusetts Institute of Technology, Princeton University, Cornell University, the University of Texas, the University of California, the Ohio State University, the University of Illinois (Champaign, Ill.), and the Georgia State University, at Atlanta, Ga., and are distributed geographically in order to save mileage. We established in those schools an intensive training course of eight weeks in the essentials which it is necessary for the student to know in regard to the machinery and the mechanical side of the work. I had them take hold of that right away. Incidentally, we saved the Government hundreds of thousands of dollars by eliminating the weak and undesirable material at the outset. Those schools have been and are a great success.

You have heard a great deal of them, and probably a great many young men have come to you and tried to get into those schools.

Instead of sending the young man out to one of the flying fields first, we thought it was a good idea to start him on the university campus, and he could get a good start there in his engine training and in his radio training, and then we could utilize the staff of the university to give us whatever professors we needed in that instruction work. We had no time to train men to do that work, but we had to have an organization, which was already at hand. We sent along a West Point man to command the cadets. The work all over the country in those schools was standardized, and the course was made an eight weeks intensive course. Every boy has the same examination, goes through the same thing each week, and passes on through until he graduates.

We call them cadets during that period. Though enlisted as privates, we gave them that name, so that we can have control over them. They receive pay of \$100 a month, just as the men in the officers' training camps. The schools are running full speed, and every Monday morning the personnel officer gives me a statement in regard to them. Here is one which has just been handed to me. I will read it to you. [Reading:]

In carrying out our policy for the further training of these young men, we had no schools at the outset, and so it was considered a wise thing to do to fill up the allies' schools with American cadets.

re is a bit of psychology in that matter. If we had asked to send a small detachment of cavalry to Italy, for instance, it would have been difficult, for we would have had to go through the Secretary of State. But in the case of the flying men it was a universal proposition. No one became excited about sending cadets abroad. One of the peculiarities of the flying service is that it represents, broadly, all the branches of the American Army, and you can send men abroad without much trouble. It would be difficult to send cavalry, but we are sending our flying people to help. They are all organized under American officers, of course. They will always wear the uniform of the United States, and it seemed to us that that was a wise policy. At the very beginning Canada had one of the finest flying schools in the world. We could not wait; time was the essence of the matter, so we arranged to utilize their experience, and we sent a mission up there to get everything they had to teach us in relation to the building of flying schools in this country, and those reports, with the advice of the other officers here, enabled us to get plans for our flying schools without delay. We started to build them on the 1st of June, and in five weeks the first group of schools were built. At one school they cleared three square miles of houses and buildings and erected 103 buildings. Those buildings were built under the direction of Col. Edgar, a very capable man. If you would like to have the details as to those schools, I will be very glad to have Col. Edgar come before you to give them to you. The question of shipments of men and materials overseas was a very vitally important question, and we had to send abroad a very strong industrial staff, with some 20 men, to help solve those troubles over there.

One of the first things we had to do was to build a small town and send it to France for our men. We could not ask them to build a building over there. We had to have the building and the nails to put it together, and then we sent a short railroad to connect it to the French system. All this came out of the money you gave us.

We have done the things which have been necessary to do to get our machines ready, and the result is that we are going to have ready this spring as good machines as there are in the world.

Mr. KAHN. We have read the papers that the Germans have made about the latest changes in their machines. They began with the Albatross, and then they replaced that with the Fokker, and now they have the Albatross.

Mr. SQUIER. Before you came in, Mr. Kahn, I think, I made a statement to the committee in which I said that last spring we gave out an estimate for certain machines, but we have not made one of them. If we had made the machines for which we then estimated, we would have had a lot of equipment which would have been out of the way.

Mr. KAHN. I saw some of the press dispatches from the other side, indicating that Germany is making terrific plans to beat our flying service when we get over there. Have you any information on that point?

Mr. SQUIER. All the information we have is that it is true. It would be strange if it were not true, would it not? There has been a great deal of talk about it.

Mr. KAHN. That is what I was afraid of, that Germany would get that information and be prepared to beat us.

Mr. SQUIER. As the general situation appears now, speed is the essence of the matter. Germany is going to make a great effort on the western front before we can get there, and therefore speed is the most essential factor.

Mr. KAHN. Will you have sufficient bombs for this great number of planes you speak of to keep the bombing machines supplied?

Mr. SQUIER. I think we will have.

Mr. KAHN. It is essential that you have the bombing machines.

Mr. SQUIER. Of course it is. Your bill authorized us to get the things necessary for this program, and we went out and selected the

very best men we could get. We went out and selected the machine guns we needed.

Mr. KAHN. They are in production now?

Gen. SQUIER. Yes, sir. We wanted something that will shoot. It does not make so very much difference what gun you have, provided it is a reasonably good gun. We had to be progressive in that business. We were going ahead, picking up those guns, and then it seemed desirable to transfer the fund to the Ordnance Department and let them do the buying. But we have people living in the factories where those guns are being made, and we get a report from them every day. We are the pacemaker. If there is any lack in the production of guns we know it; as a matter of fact, they are coming in as they ought to come in.

Mr. GARRETT. As fast as you expected them?

Gen. SQUIER. As fast as we need them. All of the elements have to match up, and some time each week there is something behind. You can not tell what it is going to be. We may be behind in some one thing this week, and next week we may be behind in something else, but all those elements have to be matched up.

Mr. KAHN. In your experience, how long does it take to make a serviceable flier?

Gen. SQUIER. That is a moot question. Englishmen will tell you that they can make them in a little over three weeks. Our intensive training course is planning for two months in the ground school, and three months in the flying school. We have an international training committee right here. We have with us Col. Lee, who is the best man on that subject in England, who was sent here to advise us what to do. The theory of teaching flying is different when you go across the English Channel. Col. Lee says that in teaching flying you do not want to use the training plane, but you should use the battle plane. The French theory however is more like our own. We have to umpire those things all the time.

Mr. KAHN. I presume the student smashes a plane every once in a while?

Gen. SQUIER. Yes, sir; he does.

Mr. KAHN. And the teaching plane is not quite as expensive as the flying plane?

Gen. SQUIER. No.

Mr. KAHN. So that, as a matter of economy, it would be better to teach the student in a training plane?

Gen. SQUIER. Yes. That matter of the training planes was our great problem in the beginning, but we have caught up on that now, and we are storing training planes. When we started on this proposition, we had no training planes at all.

Col. DEEDS. We have reduced the cost of the training plane about 25 per cent.

Gen. SQUIER. When I was before the committee the last time, we were paying \$8,000 for the training plane and now we are paying less than \$6,000 for it.

The thought that we have in this whole matter and the thought that underlies it all is this: Wars, if you look at them in the last analysis, are usually won by some new thing. You remember that it was a new thing, the invention of gunpowder, which changed the history of Europe; and you remember that the invention of the

needle gun turned the tide of victory for Prussia against the Austrians; and some time before that Frederick the Great was successful because he learned how to march his men around the enemy. It is always something that is unbalanced and is not known up to the time it is used that turns the tide. You may remember that the main thing Napoleon discovered was how to utilize the rise and fall of the ground so that he could place his troops in an advantageous position and move the guns around so that the enemy would not know where he had moved them.

In this war, first it was the 17-inch gun and then it was the U-boat. On the whole, we have been more or less deficient in the newer things that are now controlling this war. We have remaining the air, and America is not satisfied with trailing behind in new agencies of war. We are looking for the new thing and adopting it in that spirit. We have been very sympathetic to any plan that would aid in that direction, because we believe that underground warfare has reached a sort of impasse. You can not go much farther with it. The undersea warfare is controlling the North Sea, and the surface of the sea is not safe; and there is nothing left but the other element, the air.

(Thereupon, the committee adjourned to meet to-morrow, Tuesday, January 22, 1918, at 10 o'clock a. m.)

COMMITTEE ON MILITARY AFFAIRS,
HOUSE OF REPRESENTATIVES,
Tuesday, January 22, 1918.

The committee met at 10 o'clock, a. m., Hon. S. Hubert Dent (chairman) presiding.

STATEMENT OF MAJ. GEN. GEORGE O. SQUIER, CHIEF SIGNAL OFFICER, ACCOMPANIED BY COL. E. A. DEEDS AND COL. H. H. ARNOLD, SIGNAL CORPS—Continued.

The CHAIRMAN. General, I want to ask you some questions in reference to figures before we go further into the program. You are asking for \$1,032,240,314.77 for the aviation section, and the difference between that and \$1,138,240,314.77 is for the Signal Corps proper?

Gen. SQUIER. Yes, sir. About \$105,000,000.

The CHAIRMAN. For the Signal Corps proper?

Gen. SQUIER. Yes, sir. I have divided it into two parts, so that we could take up first the larger item, and then if you have no objection, we can take up the \$105,000,000.

The CHAIRMAN. You prefer to take up the aviation appropriation first?

Gen. SQUIER. Yes, sir.

The CHAIRMAN. The provisos under this item are just the same as those that were in the bill last year, are they?

Gen. SQUIER. Absolutely. There are one or two little points that might come up in a separate bill, or they may be put in this bill if the committee so desires.

The CHAIRMAN. Have you got the items for the aviation section, the expense items, divided according to each paragraph of the provisos? For instance, the first paragraph provides for the "Purchase, manufacture, maintenance, repair, and operation of airships and other aerial machines."

Gen. SQUIER. Not exactly. In a large sum like this, we have tried to place ourselves in your position, to see how it is possible in such a large amount as this appropriation involves, to get a thorough understanding of what the money is asked for and how it is going to be used. I think that can best be done by starting with some small part of it, and if we can analyze that in some simple way, you can see that we have a plan, and that we are working toward that plan, which is directly from Gen. Pershing.

The CHAIRMAN. That will be all right; you can give it to us in that way.

Gen. SQUIER. We have given a great deal of thought of how to present to a committee of this kind a large proposition like this so that it will be so simple that you can grasp it easily and see what our plan is. Therefore the first division of this appropriation is that of aeronautics. It was our purpose to treat that as a separate subject, and then to speak of the Signal Corps proper.

The first thing I would suggest taking up is the larger item, and then I will deal with the item of \$105,000,000.

In order to help understand that we have had a great many conferences.

The CHAIRMAN. I notice on page 15 the bill provides for the paying of 153,945 enlisted men of the Signal Corps.

Gen. SQUIER. Yes, sir. We have figured, for instance, on having 1,000 men for the meteorological service, and then we can not tell what new industries and agencies we may have to have.

We have not only this big plan, but in our own office we have a planning department and a ways and means committee composed of the heads of all the departments, who are all the time studying the estimates for all the different things and correlating them. These estimates represent the results of the studies of our experts, and they are all finally umpired by myself for each of the different elements, such as cameras and machine guns, and all the various elements. The chairman of that committee has been Col. Embick, who is a most experienced man.

Mr. McKENZIE. You say you have this plan, and you have great hopes that it will be carried out. Can you say to this committee that you have an abiding conviction that that is what is going to happen, and that this committee can rest assured that this is going to be done?

Gen. SQUIER. My central thought from the very first—and I have had the advantage of having been in this war practically two years on the front and back in London watching the terrible blunders that were made over there, and the conflict between the Army and the Navy which has not been repeated here—my central thought has been to so organize this service that we can get this thing done. The Liberty engine, for instance, is the backbone of the whole air program, both for the Army and for the Navy. There has never been any lost motion there. I am a member of the Aircraft Board representing the Army, and Admiral Taylor represents the Navy.

Admiral Taylor has acted on every contract of the Army, and I have passed on every naval contract. So there is absolute harmony between the Army and the Navy.

Now, in reference to the kind of contracts we have, I will say this. In a war like this, as we have learned, there is no time to teach people the special things that have to be done. In the Spanish American War I was in command of a battalion, and it fell to me to pick out some boys and teach them telegraphy in the evening to get ready. This is a war of entire nations, and with the small Regular Army we had, it is hopeless to imagine that we can do the vast things that have to be done in that old small way.

From the very start of this matter, the central thought in creating this organization, as far as the Chief Signal Officer is concerned, has been to find those men who can do the job, without regard to anything, politics, personal ambition, or anything else. I may say that I believe that the men behind this building program, when we give you the list of them, are the only people in the country who could put it through. If there are any other people either in this country, or in any other who can do that, they are the men who we want. We have steadfastly refused to give contracts to some of the people who have come here, who thought they could make aeroplanes or engines. In those cases we have made an inspection of their plants, and their engineering ability, and in our judgment we did not think they could make aeroplanes. It is not merely a question of giving out contracts, because we can do that easily. Nothing counts but the delivery of the thing. You can give out a contract very easily, but if the man you give the contract to can not deliver the goods, he is of no use to us in completing this program. Anybody will take a contract, apparently.

The men behind this program are men who can do things. Henry Ford is making all the engine cylinders for everybody. I have been to his plant several times. He has devised machinery, and can turn them out now at the rate of ——— a day. If any member of this committee wants to see how they are being made, it would be worth your while to make a visit to that plant.

Mr. Ford has devised machinery and has proved himself to be a big man. He took charge of that work and went ahead without any contract at all. All he wanted to know was whether we wanted them made. We went up there to see him, and he said that if we wanted his help he would do anything he could. He went ahead and got the contracts later. That is the type of man we have got to deal with in this proposition.

In building the other parts Henry Leland, the man who made the Cadillac automobile, came down here long before the bill passed, in early days, before we had any large amount of money. We asked certain men to come down here, men like those at the head of the Packard Motor Co., the Cadillac Motor Co., and the Fisher Body Co., who make a lot of the woodwork that goes into automobiles. All those people came here and met in my office, and although we had no money, they were willing to go ahead. I wrote each of them a letter then saying that we intended to give them the work and get the money later, and on that sort of a proposition they started in, built factories, etc., ordered machine tools, which is the main thing, and laid the foundation for the present development.

When it came to the engine for the training planes, we summoned Mr. John Willys, of the Willys-Overland Motor Co., who went after that proposition in like manner. This engine is a different kind of engine from the Liberty engine. We were not getting enough of them, and so we joined up with Canada, and since then we have been getting better results. We have worked absolutely in harmony with Gen. Hoar, and have allocated a number of things to Canada which we needed ourselves.

The Dayton-Wright Co., the National Cash Register Co., and people of that sort have been on this work, and if they can not build planes, I do not know who can. That is the only way I know how to get those things, by getting the people to make them who can do the job. When we go after a man, we simply measure him by what he has done, and I am willing to take him on, if he has done things. I can say this, Mr. Chairman and gentlemen, that if we have not the best people behind this proposition we do not know who they are.

We have refused to give contracts to people whom we did not believe could do the job in the way we wanted it done. But we have given out contracts in quite a large number in the hope that we might uncover new sources and encourage all sorts of people to start working on these things.

Now, in direct answer to your question, Mr. McKenzie, as to whether we will actually get these things at the time we expect to get them, I believe we will come fairly close to it, and we may surprise you. But I know of no agency we could get to do this work in the time we expect to do it if the people we have put on it can not do it.

All the people I have mentioned are men of standing and patriotism and they have come down here merely on a letter from me, and without money appropriated have gone ahead.

The CHAIRMAN. I will be glad if you will proceed with the synopsis of your plan, so that we may know what these things are for.

Mr. OLNEY. What type of machine guns do you use?

Gen. SQUIER. We use the Marlin, the Lewis, and the Vickers. We have all the Marlin and the Lewis guns that we can get, but the Vickers are not coming along yet.

Mr. ANTHONY. How many guns will that buy?

Gen. SQUIER. There are two kinds of guns, known as the fixed and the flexible. The fixed gun is a part of the machine shooting through the propeller, and has to be synchronized so that the shots will not hit the propeller blades. The flexible gun is arranged so that you can get an all around fire from it. The general designation, therefore, is what we call the flexible guns and the synchronizing guns.

Mr. TILSON. I want to ask you some questions in regard to the item for the acquisition of land, or any interest in lands, with any buildings and improvements thereon by purchase, lease, donation, condemnation, or otherwise. The amount you allow for that is \$7,000,000. In general what is that for, and where is the land located?

Gen. SQUIER. The program of fields which your committee authorized in July included an estimate for 24. You remember that those were provided for in that bill, and we have stuck to that program, although we will probably have to add a few more fields.

According to that program, the following fields have been built:

Name.	Town.	Acreage.	Price per acre.	Purchase price.
Wright.....	Dayton.....	2,245.20	\$156.00	\$350,000.00
Field.....	Belleville.....	640.00	192.00	122,895.00
Field.....	Rantoul.....	640.00	325.00	208,000.00
Field.....	Mount Clemens.....	640.00	297.00	190,000.00
urst Field, No. 1.....	Mineola.....	672.67	1,858.25	1,250,000.00
urst Field, No. 2.....	do.....	393.20	764.00	300,000.00
Kelly, No. 2.....	San Antonio.....	1,721.54	220.00	378,117.50
Kelly, No. 5.....	do.....	800.00	162.50	130,000.00
embarkation.....	Newport News.....	247.56	229.00	56,675.00
ouse.....	Richmond.....	15.50	2,200.00	34,000.00
.....	Harrisburg.....	22.44	1,000.00	22,440.00
Field.....	Memphis.....	907.61	97.00	88,010.50
Field.....	Dallas.....	650.00	350.00	227,500.00
erro, No. 1.....	Fort Worth.....	688.87	100.00	68,880.00
erro, No. 2.....	do.....	633.00	133.00	84,189.00
erro, No. 3.....	do.....	640.00	100.00	64,000.00
st range.....	do.....	251.87	100.00	25,180.00
Field.....	Wichita Falls.....	640.00	100.00	64,000.00
Field.....	Waco.....	690.00	200.00	138,000.00
gton Field.....	Houston.....	1,280.00	80.00	102,400.00
tner Field.....	Lake Charles.....	1,304.20	22.50	29,344.50
air depot.....	Indianapolis.....	20.66	2,000.00	41,320.00
rts field.....	Lonoke.....	960.00	71.00	68,000.00
stron Field.....	Arcadia.....	640.00	8.00	5,120.00
r Field.....	do.....	640.00	8.00	5,120.00
lor Field.....	Montgomery.....	800.00	40.00	32,000.00
e additional fields.....				1,500,000.00
Total.....				5,585,191.50

We have bought no land yet, except the Langley Field, which you specially authorized. We have the authority to buy land, and could have bought land at any time, but just because we have authority to do things is a good reason why we should go about it very carefully.

Mr. TILSON. That is the proposition I was coming to, whether there is any necessity to purchase a large amount of land.

Gen. SQUIER. We now have authority to buy land. We have bought no land, except that for which specific authority was provided, namely, the Langley Field, which was a definite piece of land, and which it was thought was going to be the Sandy Hook of the Aviation Corps, the aviation experimental station.

The CHAIRMAN. Most of these fields where you have training camps, as I understand it, have been donated to the Government?

Gen. SQUIER. Some of them have; yes.

The CHAIRMAN. I know they have been in my State.

Gen. SQUIER. We had authority to buy land, but we have not exercised it, although we have had pressure to do so, gentlemen. We have rented each of these fields for a period of three years, and obtained an option for the purchase of the land at any time during the three years or at the end of the three-year period. We obtained those options at the time of rental.

That was due to the fact that unless we got a price on those lands then, if the war went on for any length of time, the price might be doubled or trebled. It seemed to be the wise thing to do to be certain of what we were doing. I for one, felt that instead of going ahead and buying the land we had better get a three years' lease on it. There was no particular hurry about rushing off and buying the land, at least before we started to build.

On the other hand, if you improve land and put Government money on the improved land, and make it worth several times the price of the land, we might without an option of purchase be placed in an

equally serious position. We are going ahead exactly as we figured to do when we got the authority in the bill; that is, we have gone on with the plan of 24 fields.

The CHAIRMAN. What you have given as the purchase price is the option price?

Gen. SQUIER. Yes, sir; we can buy them at those prices at any time we please within three years.

Mr. ANTHONY. Will you need all these fields after the war?

Gen. SQUIER. I am coming to that. We have estimated the total amount with the price of each, and figured that during the year we would buy half of them and let it go at that for the present. The ones we buy and the strategical location of the other fields will have the careful thought and consideration not only of the Army authorities, such as the General Staff, but also of certain civilian bodies which we have asked to cooperate with us with a view to the future development of aviation.

The Government has improved certain of these lands to a far greater extent than the value of the ground while certain others remain to be built. I think the flying movement is so huge that it will be unquestionably to the advantage of the Government to buy many of these fields, and my belief is that when all of these thousands of flying men come home after the war, the flying movement will have come to stay. The nearest we could come, after careful consideration of the matter, to the number of fields we think ought to be bought, is an estimate of 50 per cent. We have recommendations as to which ones should be bought immediately. We are planning so that in the future we can fly from field to field without a greater distance than a given number of miles, so that in the training of the Army, so far as the fliers are concerned, we can fly all the way from the Atlantic to the Pacific, and we want to locate the fields in such strategical positions that we could start a squadron from New England and let them fly to Texas.

The CHAIRMAN. As I understand it, most of the fields were turned over to the Government for the purpose of the erection of buildings on the fields by the Government, and the Government was not required to pay any rental.

Gen. SQUIER. That is true to a considerable extent.

The CHAIRMAN. Then if you want to establish a permanent institution at any of those fields, you will have the option of purchase?

Gen. SQUIER. Yes, sir. As time goes on, people almost offer to build the buildings for you. For the last big group we are building in Arcadia, Fla., we did not pay anything for land.

Mr. KAHN. Do you contemplate the purchase of any additional land, or erecting buildings in any additional places?

Gen. SQUIER. Yes, sir; I think so. We built the schools in groups, so that we can digest them, and we built five at a time.

Mr. TILSON. Do you feel that the coastal stations are needed, along the coast?

Gen. SQUIER. Between now and a year from next July, a great many things may happen, with the chances either way about equal. That should be done, and the only question is whether we will get time to do it. Probably we will; in any case we should have the authority.

Mr. KAHN. When you send the aviators to France, will you leave a sufficient number here for protection?

Gen. SQUIER. Yes, sir.

Mr. KAHN. You will retain a certain number of commissioned fliers in this country?

Gen. SQUIER. Yes, sir; as far as we can, as far as the progress of the war develops. It is my judgment that these things should be authorized so that we may do them if it is possible. Just because we have authority to do things, we do not necessarily do them unless it is the right thing to do.

Mr. TILSON. The same statement applies to the border conditions?

Gen. SQUIER. Yes; they undoubtedly should be built. We should have the authority. You can safely give us that authority. They will not be built until the General Staff wants them built.

Mr. TILSON. That would also apply to the construction of permanent stations in Panama, and in Hawaii; that is, what you have been saying?

Gen. SQUIER. It depends upon the development of the war. We want the authority to do it. We have not done it, but I believe you can safely trust us on the record we have made.

Mr. GORDON. Do you not think that is undertaking to delegate all of our legislative functions to the General Staff, and leaving it to their judgment as to whether or not they will spend the money? Is not that an abdication by Congress of this function?

Gen. SQUIER. I do not look at it in that way. This committee can call the Chief Signal Officer before it as often as it pleases.

Mr. GORDON. After we have appropriated the money it does not make any difference whether we call anybody or not. What was done with the \$740,000,000 we appropriated last year?

Gen. SQUIER. I told you yesterday about the progress we have made.

Mr. GORDON. Have you anything like a detailed summary?

Gen. SQUIER. Yes, sir. Col. Robert Montgomery will bring you the most complete statement of all the contracts and all the obligations we have made. I hope you will call him before you.

Mr. ANTHONY. Can you not have a rough statement of that prepared to go into the record?

Gen. SQUIER. Yes, sir.

Mr. GORDON. I notice by your memorandum that the number of fliers is one-fourth of the total number of the commissioned officers. What function would the officers who are not fliers perform? Are all the people in the Aviation Section commissioned?

Gen. SQUIER. No; they are not. The officers who are not fliers perform administrative functions.

Mr. GORDON. Are your mechanics on the ground commissioned officers?

Gen. SQUIER. No, sir; they are not commissioned officers. They are privates, corporals, and sergeants.

Mr. TILSON. But you have commissioned mechanical engineers?

Gen. SQUIER. Yes, sir; we have the greatest collection of specialized brains of various kinds that I think I ever heard of. My own corps is drifting so much into science that you would be astounded at the new things this war has developed, that no one ever dreamed

of at all; and since they are not Infantry, if they are scientific, we seem to get them—that is, the newer things that have to be handled. Gen. Pershing has to have the type of service rendered by the meteorological people, so that he can have predictions as to the kind of weather they are going to have. That is a matter of serious consideration, requiring the use of all sorts of instruments. It is not infantry, or cavalry, or artillery, but it has got to be done.

Mr. ANTHONY. They are used to prognosticate the weather conditions, and that has an effect on the plan of campaign?

Gen. SQUIER. Yes, sir. War is becoming so scientific that it is only the country that has the civilization to do some of these things that can defeat people who can not do them. For instance, consider what I told you about as to the aeroplanes. There is nobody in Turkey who could do that sort of work. They could not make them in Turkey.

The civilization that can do these things is going to prevail, and it may have a political meaning. The control of war will be in the hands of that civilization that can do these specialized things. We must defeat our enemies by mobilizing our specialized brains to the limit of possible usefulness.

The principal illustration of that, it strikes me, is the type of people we have in the Signal Corps. I have in the Signal Corps the head man in physics of the University of Chicago, Prof. Millikan, now Maj. Millikan, one of the best men in that subject anywhere in the world. What is he doing just now? He is helping the Navy on the U boat problem, in connection with all the refinements of working on that delicate business, and there is no man in the world who knows more about that than he does.

Mr. SHALLENBERGER. Is it not true that Artillery officers now in the Army can do that very thing, operating these batteries, without the aid of these trained scientists?

Gen. SQUIER. No, sir; nobody can develop those instruments except trained physicists.

Mr. SHALLENBERGER. The Artillery officers can operate them; it is a comparatively simple thing now, is it not?

Gen. SQUIER. Yes. But I want to make this point perfectly clear, that Army officers, as a rule, can not do those things, nor make the instruments that have to be developed to measure these things.

I have a dozen or more professors from Harvard, Yale, and other universities engaged in that sort of work. There is no use in trying to do it in any other way.

Mr. GORDON. Is that the reason why it is necessary to commission three-quarters of the officers who are not flying?

Gen. SQUIER. Yes, sir; that is one of the reasons.

Mr. GORDON. There is no limitation upon the authority to commission men in your department?

Gen. SQUIER. Except the approval of the General Staff and the President, which has to be had in each case. We have to submit the number of majors and captains we want, and sometimes it is difficult to get them to see these things as we see them.

Mr. GORDON. Then, as a matter of fact, in time of war Congress has nothing to say about the number of men. All it has to do is to appropriate the money for them. The President, in other words, can commission men without limit.

Mr. TILSON. He can not commission officers, in number, beyond the number that Congress has appropriated to pay for.

Mr. GORDON. We do not appropriate the money to pay them until after they are commissioned.

Mr. GREEN. I think that is not true in the Regular Establishment, and under the Reserve Officers' Corps law there is no definite limitation.

Mr. GORDON. Under the draft law the President can organize technical units without number.

Mr. GREEN. They are put into the reserve.

Mr. KAHN. Would you want to curtail his power, if he found it necessary to commission certain men skilled in science, and in that way we could win the war?

Mr. GORDON. It is not a question of whether or not I want to curtail his power. I was inquiring as to the extent of the power and the exercise of it. Congress, aside from its power to appropriate the money, has no voice in the matter.

Mr. McKENZIE. There has been a great deal of pressure brought to bear, has there not, by certain people on the outside, to get men commissioned in your branch of the service for ground work?

Gen. SQUIER. Yes, sir. I do not know that I would say a great deal of pressure. There has always been some pressure. In general, it has been very fair.

Mr. McKENZIE. You do not have an opportunity of investigating the application of every man who applies for a commission?

Gen. SQUIER. No, sir.

Mr. McKENZIE. Do you have any board that looks into that?

Gen. SQUIER. I do. On the first of the year I directed all commanding officers to carefully survey all the personnel in their departments, on the supposition that here and there somebody was in the service who should not be there, and each commanding officer is in the process of combing the whole field. No longer ago than yesterday I discharged one man.

Mr. NICHOLLS. The question was asked you about the men on the ground who are mechanics. What are the qualifications for going into that work? Let me give you an example. I have in mind the case of a man who wants to apply for that kind of work, and he has been a mechanic for 17 years. He has been, I think, the chief mechanic for a railroad company and the chief mechanic for several big automobile concerns. He is 36 years old, and, as I understand it, under your rules, he would have to enlist and be sent to some training school. What would be the chance of a man like that to get a commission with your working force?

Gen. SQUIER. Splendid; we will promote anybody who shows that he has the necessary ability.

Mr. NICHOLLS. How would he get in?

Gen. SQUIER. Enlist and go to the school.

Mr. NICHOLLS. That is the only way?

Gen. SQUIER. Yes, sir.

Mr. NICHOLLS. If a man has a record that shows that he is a competent mechanic, would there be any chance for him to be commissioned, upon his record, without going to one of your schools?

Gen. SQUIER. Not as a mechanic.

Mr. NICHOLLS. Regardless of his ability as a mechanic, he would have to go to school?

Gen. SQUIER. At present candidates for commissions in the non-flying part of the Aviation Section intended for duty as engineer or mechanical officers, supply officers, or adjutants are sent to schools for training.

Mr. NICHOLLS. I am not complaining about that; I was only asking for information.

Mr. SHALLENBERGER. General, will you put in the record a statement as to how many men you have put into your corps who did not go to your school?

Gen. SQUIER. Yes, sir. We have put men in like Col. Deeds here, who has never gone to a Government school.

Mr. FIELDS. Are you having any trouble in getting suitable mechanics at this time?

Gen. SQUIER. No, sir; I think the mechanics are coming along splendidly.

Col. ARNOLD. Now, we have over several thousand mechanics under training, and are utilizing the northern schools where we have to stop flying at this time of the year.

Mr. FIELDS. Are you inducting mechanics of the draft age into the service at this time?

Gen. SQUIER. I do not know how that is. You mean some citizen? I think the law does not permit us to do that.

Mr. FIELDS. There is an order issued by the Secretary of War, permitting men to go into certain branches by induction by the local boards, and there are a great many young men in the country within the draft age who are splendid mechanics, and some who have been asking me whether they could get in or not, and I wanted to know whether you can do that.

Gen. SQUIER. I think we can do that.

Mr. KAHN. You are inducting men now. A man has to go to school, and he can enlist in your corps, he is inducted.

Mr. TILSON. If you could not do that, you would bar yourself from the services of some of the very best mechanics in the country.

Mr. FIELDS. The very best mechanics are within the draft age, and if you could not get them by the process of induction, you would lose their services.

Gen. SQUIER. What is more to the point, we will go to the camps and take them away.

The CHAIRMAN. Do you ask for their transfer?

Gen. SQUIER. Yes, sir; I am doing that right along, every day.

Mr. SHALLENBERGER. Will you include in the statement I asked you for awhile ago the rank given the officers who did not go to the schools; not only the number of officers, but also their rank?

Gen. SQUIER. Yes, sir.

Officers of the Aviation Section, Signal Corps, not sent to training schools or camps: Colonels, 4; lieutenant colonels, 11; majors, 71; captains, 251; first lieutenants, 791; second lieutenants, 475; total, 1,603.

Mr. SHALLENBERGER. The reason I ask that is that I have had this experience: You were asked by Mr. Nicholls in regard to a specific case. I have been to the Ordnance Department and to another department with applications of such men, and they were specifically

wanted to be taken in, and they have always been told that they had to serve in these particular places, which they thought they ought not to do. I informed then that that was the rule. I learned that there were some men that were not required to do that, and these men told me they had heard of some men who had not had to do that.

Gen. SQUIER. There are men who have been put in without going to the school.

Mr. NICHOLLS. Why were they taken in?

Gen. SQUIER. When we went into this thing at the beginning, for instance, we found that we wanted, for instance, acetate of lime to use in making acetone. The question was, where is the man who knows about that? We did not care whether he had gone to school or not. We simply got him and put him to work without a moment's delay.

Mr. SHALLENBERGER. If you want a man to work with acetate of lime to make acetone, is it necessary for you to give him a commission?

Gen. SQUIER. I would much rather have him in the uniform of the United States Army so the Government can control him at all times.

Mr. SHALLENBERGER. We were told by the Quartermaster General that in the foreign armies they give the men in the Quartermaster Department a different rank from the men in the line.

Gen. SQUIER. You mean as sergeants or corporals?

Mr. SHALLENBERGER. No; I mean the men who serve as commissioned officers in the foreign armies. For instance, he told us that in the German and the French Armies they do not have the same relative ranks as the men in the Quartermaster Department in our Army.

Gen. SQUIER. We give them a somewhat higher rank?

Mr. SHALLENBERGER. No; they have a different rank; they do not have the same rank as the men in the line, they are not in the Army as men in the line.

Gen. SQUIER. Not in France.

Mr. SHALLENBERGER. They have a different status. I refer to the whole force of the army.

Mr. KAHN. I think Gen. Sharpe referred especially to the German system.

Mr. SHALLENBERGER. He said that was true in the French Army, that the officer in the quartermaster's department had a different title from the man in the line, but that he was saluted the same as the man in the line, although he had a different title.

Gen. SQUIER. We may come to that.

Mr. SHALLENBERGER. We have been told here that it has been necessary all the time to grant commissions to these men, under which they have the same rank and status and allowances as the men in the fighting line, and there has been a great deal of criticism of that.

Gen. SQUIER. Yes, sir; I served eight years as a second lieutenant, as I remember.

Mr. GREENE. Is it not true that as a part of the original policy of our Army and Navy they made that distinction between the status of technical auxiliary people connected with the Army and the men in the fighting line? We have always given a military grade and status to every man in the Army, and it has, has it not, been the general opinion that it can not be effectively done in any other way?

Gen. SQUIER. I think it is sound. You go to England and you will find that all the people connected with the army have been put into the uniform of their country, just for convenience and simplicity and for control. You try to go down town in Paris as a civilian and some one stops you at every corner and wants to know who you are and where your pass is. So it is a matter of absolute convenience to put all those men into uniform. Then you are working under the rules of other people in the service and you can carry out your duties without explaining who you are all the time.

Mr. KAHN. We have been drifting toward commissioning more men than the other countries have commissioned, and so we have commissioned veterinarians and pay clerks and quartermaster clerks and dentists, and all those kinds of people, and we have made them a part of our Army, so that if you go back to the systems that are in vogue in other countries we would have to reverse our policy even as it was in peace times.

Mr. ANTHONY. I would like to get a little information in regard to the balloon service. Are the balloons you use observation balloons?

Gen. SQUIER. Yes, sir.

Mr. ANTHONY. We understood that the aeroplane was to be used to get control of the air. After you have control of the air, are the balloons of any service?

Gen. SQUIER. Yes, sir.

Mr. TILSON. It is a good thing to have a station in the air, a permanent station?

Gen. SQUIER. These are captive balloons. The Germans have the most wonderful balloon service, and they are meeting the allies completely in the air. When I was on the lines in the second battle of the Ypres, it was an inspiring sight to see these balloons behind their own lines watching the movements of the allied troops. As they could be pulled down, the great object was to hit them or drive them away; but there they were, day after day, because the allies were caught and did not have anything with which to combat them.

Mr. ANTHONY. You want the balloon service to supplement your aeroplane service?

Gen. SQUIER. Yes, sir.

Mr. ANTHONY. Have you continued the development of the Zeppelin type?

Gen. SQUIER. When it comes to the Zeppelin, I think I can safely say that the nations themselves have not agreed at all. Germany is the only country that started on the Zeppelins years ago. England did not take any stock in it, and America did not have either Zeppelins or aeroplanes.

Mr. ANTHONY. What became of the Zeppelin we started to build about a year ago? Was it ever completed?

Gen. SQUIER. No, sir.

Mr. ANTHONY. Has any money ever been spent on it?

Gen. SQUIER. I can give you that information. I am a member of the Zeppelin Board.

Mr. ANTHONY. I would like to have a statement in the record showing how much money was used in that work and what the status of it is now.

Gen. SQUIER. Admiral Taylor is also a member of that board. I will be glad to furnish the statement you ask for.

Col. DEEDS. The main thing we are getting at now is the development of a kind of gas that will not explode.

Statement.—The joint Army and Navy Zeppelin Board, of which Admiral Taylor is chairman, has had several meetings during the past months, and up to the present has been investigating certain metallurgical problems involved, types of gas to be employed, and, in general, the obtaining of suitable designs and specifications. A joint Army and Navy mission is being sent abroad to obtain accurate information on the Zeppelin which is not available here.

(Thereupon the committee adjourned to meet to-morrow, Wednesday, January 23, 1918, at 10.30 o'clock a. m.)

COMMITTEE ON MILITARY AFFAIRS,
HOUSE OF REPRESENTATIVES,
Wednesday, January 23, 1918.

The committee met at 10 o'clock a. m., Hon. S. Hubert Dent (chairman) presiding.

STATEMENT OF MAJ. GEN. GEORGE O. SQUIER, CHIEF SIGNAL OFFICER, ACCOMPANIED BY COL. E. A. DEEDS, COL. H. H. ARNOLD, AND MAJ. R. M. JONES, SIGNAL CORPS—Concluded.

The CHAIRMAN. General, I am going to ask you to put in the record a detailed statement in reference to the items you ask for. There are two subdivisions of your items, first, the Signal Corps proper, and then the Aviation Section, which is the big item. I am going to ask you to put in the record a detailed statement first of the Signal Corps proper, because that comes first.

Gen. SQUIER. The method of analyzing the estimates of the Signal Corps proper is exactly similar to the method used in analyzing the estimates for the Aviation Section, and I have here a similar analysis of that estimate. I see no objection to putting that list in the record.

The CHAIRMAN. We would like to have it in the record.
(The list referred to is as follows:)

Summary of Signal Corps estimates, 1918-19.

Page 1. Salaries of civilian employees.....	\$750,000.00
2. Service and installation of telephone and telegraph apparatus at camps and cantonments (home).....	1,500,000.00
3. Installation, maintenance, and operating expenses of supply depots and routine departmental administration expense (home).....	864,334.38
4. Maintenance, operating, and administration expenses of administration, supply depots, etc., of insular possessions....	34,000.00
5. Equipment of new organizations not at present officially included in the military program.....	3,500,000.00
6. Wastage of signal equipment in field of active operations....	50,000,000.00
7. Wastage of signal equipment in organizations adjacent to fields of active operations.....	3,000,000.00
8. Reserve equipment in France.....	12,500,000.00
9. Reserve equipment in United States.....	12,500,000.00
10. For development and purchase of new and special apparatus.	5,000,000.00
11. For radio equipment in addition to organization equipment..	4,500,000.00
12. Motor vehicles in addition to organization equipment.....	2,000,000.00
13. Photographic equipment and supplies.....	1,888,678.98
14. Pigeons, maintenance, equipment, and supplies.....	795,000.00

Page 15. Maintenance and extension of railway, signal telephone, telegraph, and cable service in France.....	\$2, 250, 000. 00
16. Installation of telephone and telegraph apparatus at camps and cantonments in France.....	496, 530. 95
17. For research work and inspection in France.....	250, 000. 00
18. Maintenance and operating expenses of supply depots to store material in France.....	617, 510. 46
19. Over-seas emergency purchase fund for application as required.	3, 500, 000. 00
	<hr/> 105, 946, 054. 77

Gen. SQUIER. I would like to say, Mr. Chairman, for the benefit of the members of the subcommittee in charge of this particular section of the bill, who may have to defend the items of this appropriation on the floor of the House, that we hear certain questions asked every day which may give a good index of what people want to know. We have a statistical department whose business it is to keep data of that kind all the time, and I have here classified data of all sorts, in reference to the subjects appropriated for under these items. For instance, some one might want to know about the cost-plus contracts. We have the data in reference to that which we can furnish you. We have data in reference to almost any sort of thing that might come up on the floor of the House, and we will be glad to give it to you in order to enable the members of the committee to prepare themselves to answer. In order to do it in what we believe to be the most efficient way, I propose, in the first place, to leave this book which I have been using in the hands of the chairman. It was made for the use of the chairman. It contains a voucher to back up each one of these statements in a very condensed form.

In addition to that, under each of these heads we have all sorts of data made up by the statistical department in my office. There is only one copy of that in existence. I propose to detail an officer who will be especially at the service of the members of the committee, one of our experts, who will bring that book down here at any time and explain in detail any part or thing in connection with these estimates that you may want to know. We have that data here. It would probably take us weeks to go into it in detail, if we started a discussion of each one of them, because it is a very large proposition. We have anticipated giving you information to cover questions that might come up on the floor of the House, based on the questions that have come up in our office.

The CHAIRMAN. You have put the detailed statement in reference to the estimates of the Signal Corps proper in the record. Now, let us take item No. 5, "Equipment of new organizations not at present officially included in the military program, \$3,500,000." How do you explain that?

Gen. SQUIER. The estimated amount of that item is \$3,500,000. It merely means, judging by past experience, that we must be prepared to establish any sort of units called for. It is not an infrequent occurrence for an entirely new unit to be required at almost any time.

I will give you an example of that. We received a message a couple of months ago to send immediately railroad telegraph battalions to operate the French railroads, which are now being used by the United States in moving our troops. We had to go out and organize promptly four telegraph battalions, and go to the railroads

and get the people for the block signaling and all that sort of work. That is something new, and something nobody would have thought of, probably. We have had to go further and help the French in operating their railroads. What has happened in France is what is happening in Germany.

The CHAIRMAN. How do you arrive at the amount, \$3,500,000?
Gen. SQUIER. Ten telegraph battalions at \$130,000 apiece, a telegraph battalion meaning any kind of battalion that is to help the French run their railroads, or the intelligence system of the country, or new organizations of any sort that may appear. That \$130,000 is the unit cost.

Signal equipment of new organizations not at present officially included in the military program..... \$3, 500, 000. 00

This item is necessary by the creation from time to time of new organizations not at present officially included in the military program requiring signal equipment and includes items of the following nature which were necessary during the past year and which we believe will be necessary for this year.

10 telegraph battalions, at \$130,000..... 1, 300, 000. 00

The cost of signal equipment for one telegraph battalion is as follows:
Motor trucks and trailers..... \$82, 563. 00
Motorcycles with side cars..... 10, 238. 00
Inspection cars..... 2, 906. 00
Wire..... 6, 530. 00
Lance poles..... 6, 150. 00
Telephone and telegraph apparatus..... 3, 200. 00
Tool kits, chests, etc..... 2, 230. 00
Line tools..... 1, 200. 00
Field glasses and visual signal equipment..... 750. 00
Miscellaneous..... 14, 233. 00

Total..... 130, 000. 00
10 field signal battalions, at \$71,324.96..... 713, 249. 60

The cost of signal equipment for one field signal battalion is as follows:
Motor trucks..... \$28, 570. 00
Motor cycles and side cars..... 6, 516. 13
Inspection..... 735. 00
Wagons, instrument..... 750. 00
Wire carts (2-horse)..... 7, 200. 00
Field typewriters and Signal Office equipment..... 1, 200. 00
Wire..... 4, 320. 00
Telephone and buzzer equipment..... 3, 386. 00
Radio..... 6, 600. 00
Tool kits, chests, etc..... 2, 040. 00
Line tools..... 1, 124. 00
Field glasses and visual equipment..... 1, 810. 00
Miscellaneous..... 7, 073. 83

Total..... 71, 324. 96
20 regiments of 5 or 6 inch artillery, at \$28,000..... 560, 000. 00

The cost of signal equipment for one regiment of artillery is as follows:
Telephone and telegraph apparatus..... \$2, 590. 00
Radio..... 3, 000. 00
Cable..... 6, 010. 00
Field glasses..... 8, 400. 00
Wire..... 7, 500. 00
Miscellaneous signal material..... 500. 00

Total..... 28, 000. 00
10 forestry regiments, at \$6,500..... 65, 000. 00
Miscellaneous equipment of new organizations..... 861, 751. 40

3, 500, 000. 00

The CHAIRMAN. That is the general plan?

Gen. SQUIER. Yes, sir; that is the general plan. The main thing is regiments of heavy artillery that are being organized to take over the big guns we are going to build. Those have to be carefully connected up with a cable buried 8 or 9 feet deep and armored in order to have the barrage fire sure to clear our own men and not hit them. You have to have the best possible communication between the Infantry and Artillery, so that the barrage fire will stop at the proper moment and the Infantry will not be killed by our own fire.

The CHAIRMAN. Now, will you explain item No. 6, "Wastage of signal equipment in field of active operations, \$50,000,000"?

Gen. SQUIER. We got at this whole question just as we did in the case of aviation. It all finally came from Gen. Pershing's staff. We sent over to France, as soon as the war broke out, a complete staff to study the situation there, and the French sent two professors to bring us all the new things in the war, whom we assigned to the Bureau of Standards.

Gen. Pershing studied the whole situation and sent on the same sort of an estimate for the Signal Corps proper, which we showed you yesterday in reference to the Aviation Section.

That being so, we had to estimate wastage in signaling equipment. What are the prospects of war, and what must we consider? Those were the things that we based our studies on. So that Gen. Russell, with the advice of all our allies in Paris and London, produced a table of general wastage, as far as any human being could figure it out. Some of those things are allowed more wastage than others, and this is the percentage of wastage which came from abroad. There is no reason why that should not go into the record.

Wastage, signal equipment.

Classification.	Value of Signal Corps equipment in hands of organizations.	Percentage of maintenance and replacement.	Money value of maintenance and replacement.
Kits, flag.....	\$332,942.69	200	\$665,885.38
Heliographs.....	175,840.00	100	175,840.00
Other visual signal equipment.....	197,630.40	200	395,260.80
Field glasses.....	3,388,978.00	300	10,166,934.00
Wrist watches.....	231,942.45	100	231,942.45
Buzzers and accessories.....	442,691.08	50	221,345.54
Wire:			
Buzzer.....	49,204.80	1,000	492,048.00
Field.....	1,065,120.00	1,000	10,651,200.00
Outpost.....	53,280.00	1,000	532,800.00
Other.....	103,836.03	1,000	1,038,360.30
Wire carts.....	258,768.00	50	129,384.00
Cable, armored.....	3,244,032.00	500	16,220,160.00
Switchboards:			
Buzzer.....	30,720.00	300	92,160.00
Outpost.....	280,800.00	600	1,684,800.00
Camp.....	25,520.00	50	13,760.00
Other.....	23,287.50	25	5,821.88
Telephones, field.....	271,392.00	300	814,176.00
Miscellaneous.....	1,316,177.52	200	2,632,355.04
	11,492,162.47	.....	46,163,733.39

Percentage of wastage as a whole approximately 400.

You will notice that the average wastage of the total signal equipment in the front zone of operation is 400 per cent per year. The whole outfit disappears every three months, everything considered, on the average.

Gen. Pershing's estimate was that a million dollars' worth of wire was absolutely destroyed every month, so it is not a question of maintenance at all. It is absolutely blown to pieces, so you see what a terrible wastage of wire there is. Then there are eighteen hundred telephones that are absolutely blown to pieces every week. There is no question of wastage there at all.

So that, after studying this proposition carefully, it was determined that 400 per cent would be the average wastage of the whole equipment. The general estimate for the total equipment of the Army at the front zone in France, is \$12,500,000, so that four times that would give you the necessary year's supply. That amounts to \$50,000,000.

Mr. McKENZIE. General, are not the items Nos. 6, 7, 8, and 9, designated, "Wastage of signal equipment in field of active operations," "Reserve equipment in France," and "Reserve equipment in the United States," practically all reserve items? In other words it is for a reserve supply to take the place of the destroyed material?

Gen. SQUIER. Yes, sir.

Mr. McKENZIE. What are the prospects of your being able to purchase all this stuff and get it over to France?

Gen. SQUIER. The next two items are related to this one. The estimated value of the whole equipment at the front zone at any one time is \$12,500,000 and it disappears four times a year in the front zone, and 100 per cent in the adjacent areas. So that that gives you the item of \$50,000,000.

The item for "Wastage of signal equipment in organizations adjacent to fields of active operations," No. 7, is \$3,000,000. That wastage is not as great as the wastage at the front zone, and that is estimated at 100 per cent per year.

Item No. 8, "Reserve equipment in France," merely represents a three months' supply that must be on hand.

Gen. Pershing has insisted that our depots shall have three months' supply over there, and that there must also be three months' supply in reserve here, and not to be caught napping, we need to have enough of the material made. We must go ahead and have it ordered, three months' supply in this country, and a supply for three months more in the storehouses in France, because of the U-boat situation. So the next two items are related to the item of \$50,000,000, and represents three months' store house supply in each place.

Mr. McKENZIE. The point I wanted to get at is, are you having any trouble in procuring a sufficient supply of necessities, to hold them in reserve. Is our country in a position where we can supply these items?

Gen. SQUIER. I think the situation to-day is reasonably satisfactory, as much so as the other elements of the Army. We have mobilized all there is in this country in making this equipment. The Western Electric Co. and the General Electric Co., the two largest concerns on earth in their particular lines, are actively engaged on this proposition, and they have orders and are producing, and in

addition to that we have all the smaller companies manufacturing material.

Mr. McKENZIE. What can you say in reference to the price you have to pay for copper wire now, compared to the price of copper wire a year ago?

Gen. SQUIER. I do not know the exact figures, but we buy that all through the copper committee.

Maj. JONES. It is cheaper than it used to be, due to the fact that it is being handled through the war industries committee. Those gentlemen have fixed the price, and you will find, if you investigate, that the figure is lower than it was at the beginning of the war.

Mr. McKENZIE. It would be very encouraging if you would put those figures in the hearing.

Maj. JONES. We can obtain those figures for you, and put them in the hearing.

Price paid by the Signal Corps for copper.

The first contract placed by the Signal Corps in August for quantity delivery of copper was 16.6739 cents a pound, effective until September 20.

The price advanced September 20 to 23½ cents, subject to revision January 1. Recent advices continue the price at 23½ cents.

In this connection it is pointed out that the market price of copper prior to the entrance of the United States into the war was approximately 33 cents a pound.

Gen. SQUIER. We use all the agencies possible in buying all of our material. We secure clearances from the different committees, and in reference to our fields, we do not let the contracts until we get the advice of the contract committee.

The CHAIRMAN. I do not see any objection to you putting in the record a general analysis of each one of these items, just as you have explained those items which have been specifically inquired about.

Gen. SQUIER. I will be pleased to do that.

Mr. KAHN. I would suggest that the General put into the hearings a little summarization of these various amounts.

Gen. SQUIER. Take the matter of pigeons, for instance, and unless you are familiar with the pigeon industry you would hardly believe what we have to do. It is a serious business.

Mr. KAHN. Are you buying them in this country?

Gen. SQUIER. Yes, sir.

Mr. TILSON. Are you training them in this country?

Gen. SQUIER. Yes, sir.

Mr. CALDWELL. Are you cooperating in that matter with the Pigeon Fanciers' Association?

Gen. SQUIER. We have everybody in the country at work. I never thought so very much about raising pigeons before, but we have found that it is a very important business.

Mr. GARRETT. How do you use the pigeons?

Gen. SQUIER. We use them in connection with the advanced Infantry, principally. In these days they tear the whole surface of your front line Infantry to pieces, and frequently tear all the wires to pieces. We have had to go to all sorts of extremes to keep the advanced Infantry in contact with the Artillery behind.

Mr. GARRETT. How do you operate the pigeons?

Gen. SQUIER. We release them from their cages in the front line Infantry and they fly back to the Artillery behind.

Mr. TILSON. The people in the front line would have them in captivity there?

Gen. SQUIER. Yes, sir; they are a very valuable aid.

Mr. GARRETT. They are all kept stored at a certain place, except those that you want to move forward?

Gen. SQUIER. Yes, sir; we use them from aeroplanes also.

Mr. KAHN. I saw some pictures in the early part of the year showing how they were using pigeons for taking photographs of the defense lines. Do you attach any photographic apparatus to the pigeons you use?

Maj. JONES. We get photographs from our aeroplanes. We have a large number of pigeons in cages on the first line, and the pigeons come back to the rear line all shot to pieces. They are more or less illtreated on the front line, and as soon as they are liberated they fly as fast as they can back to where they belong.

Mr. KAHN. Do you remember which one of the belligerents was using them for taking photographs?

Maj. JONES. Both the English and French were using them.

Gen. SQUIER. We now take a series of photographs from the aeroplanes, and you can see that the methods of road sketching that used to be in vogue have disappeared. A photograph does not lie, but a man can be mistaken.

Mr. MCKENZIE. Has any one approached you to help you organize a dog unit in the Signal Corps?

Gen. SQUIER. No, sir; not yet. We are expecting them any day. I believe we are the owners of Alaskan dogs to a considerable extent.

Mr. ANTHONY. Under what bureau are the dog forces being organized? They are organizing them at several of the western posts?

Gen. SQUIER. That is not in the Signal Corps at present.

Mr. ANTHONY. Are they not to be used for signal purposes in the field, or are they to be used for doing Red Cross work, such as bringing in the wounded from the fields.

Gen. SQUIER. I suppose the Red Cross work is the main thing they will use them for. I see that Gen. Scott gave an interview recently in which he said they are most valuable. We have not made preparation for using them in the Signal Corps work, because we do not know what we are going to come to next.

Mr. MCKENZIE. You do not think there will be any danger of losing the war if we were to forget about the pigeons and dogs.

Gen. SQUIER. I do not mean for a moment to indicate that they are not important at the front.

Mr. FIELDS. How many have you now?

Gen. SQUIER. I have the estimates here.

Mr. FIELDS. Do you get these birds mostly from South America?

Maj. JONES. Our birds are obtained in the United States and in France and in England. We have lofts in the United States at the training camps, and we have birds being trained abroad. Some of our birds are on the front-line trenches now and are sent back from day to day.

Mr. FIELDS. At what age are they shipped to go into service?

Maj. JONES. Some of them are taken as squeakers and trained, and others are taken when they are 1 year old and 2 years old. We have men in charge of them who came from the Pigeon Fanciers'

Association, men who are familiar with handling them. Those men were put into the service as soon as the demand for pigeons began, and they are there now operating with those birds.

Mr. FIELDS. They have to be trained before you can use them?

Maj. JONES. Yes, sir. They are put in the training camps, both here and abroad. A good many of them are trained in our camps abroad and they are trained under actual fighting conditions in the front-line trenches.

Mr. McKENZIE. How many men have you engaged in the pigeon work, in training, handling, and housing them?

Maj. JONES. The number is comparatively small, because most of the men come out of the Signal Corps organizations that are already in the camps. We plan to obtain more later, but there are approximately four men under the division signal officer, and one pigeon expert to a division.

Mr. KAHN. Are any of the men commissioned?

Mr. FIELDS. As I understand it, the one thing you do not have to train those birds to do is to get home?

Maj. JONES. Yes, sir; that is true. The pigeon is treated very well in the rear of the line; his coat is kept clean and everything is arranged to make it easy for him, so that he likes to stay there, whereas when he gets out in the front-line trenches it is just the other way. Just as soon as you let him go he makes a bee line for home.

Gen. SQUIER. In regard to the personnel of the pigeon section, there are 10 officers and 732 men altogether. In France there are 4 officers and 110 men. There are being mobilized 6 officers and 500 men. There are 2,600 trained birds now in France, with a supply of six months' feed, at 1 pound per week per bird, and there are 12 trench mobile lofts for the battle front.

Mr. McKENZIE. The men in that particular unit are civilians, I take it; or are they commissioned?

Gen. SQUIER. Of course, we have to get the men who know how to do the thing. We want the man who can do the trick. We do not care whether he has a commission or is a corporal if he can get things done he is the man we want. That is the only way to win this war, gentlemen.

Mr. KAHN. This is another instance of how you have been compelled to issue commissions to this sort of men.

Gen. SQUIER. I would like to clear that up right now. Some member of the committee brought out the point that we are having a considerable number of people who have been commissioned, but who had not been in the schools. Anticipating that question, I had that looked up, and I will put the information in the record, as to how many people were commissioned, and the reason therefor.

The main reason was that we had no schools when the war started, and another reason was that the kind of men, most of them, who were badly needed, had already been to the best kind of school we know of, to the school we wanted them to attend, because they had been doing the thing we wanted them to do for many years in civil life.

Mr. KAHN. They had been to the school of experience?

Gen. SQUIER. Yes, sir. Another further reason was that when we organize a thing in a large way that involves an industry comparable with the steel trust, with an expenditure twice the size of the amount

expended for the Panama Canal, which took us eight years to build, we have to get people who can do it, and do it in the right way.

So, in the early stages of such a proposition as this, you have got to organize from the top down, instead of from the bottom up. If you want to start a bank, gentlemen, you do not first select the office boy, but you get the president and the board of directors, and then you let them go ahead and organize the bank.

What I had to do at the beginning of this vast undertaking was to get at the head of our departments people of unimpeachable character, people in whom the country had confidence and who already knew their job.

Mr. SHALLENBERGER. I wanted to get that information. There have been coming to me constant complaints that we are commissioning a tremendous number of officers, more than we need.

Gen. SQUIER. The best answer to that, perhaps, I gave you yesterday when I was discussing the items in regard to the aviation section, concerning the target at which we are shooting, that is to get a given number of officers and men by July 1. If you recall, that estimate had in it something like 18,000 officers, and over 10,000 of those are actual fliers. I will stand on that record.

There is another point I would like to mention. The kind of personnel that is needed, and the kind of personnel the Government is getting, is saving this country, financially, hundreds of thousands of dollars. Men are in my office by the score who could earn all sorts of salaries, who are coming down here for the salaries of captains and majors. Considering the matter purely as a business proposition, this country is getting more service for less money than any organization I ever knew of.

I have several officers—one of them is present this morning—who ordinarily earns more than we pay the President of the United States. His Army salary as an officer does not pay half the rent of a modest house. I have dozens of men in my office who draw salaries of \$30,000 or \$40,000 a year who are merely majors and captains. There are two sides to the proposition, of course. Some of the younger officers are getting things they should not have here and there. That does not, however, remove the consideration of what the country is getting in the services of the others.

Mr. FIELDS. In connection with Mr. Kahn's suggestion that the men have attended the school of experience, do you not prefer the men with the actual experience to those who have taken a short course in your schools?

Gen. SQUIER. Of course.

Mr. GREENE. As I understand it, by reason of the policy which the Government earlier adopted, and the law as constantly enforced, in order to get any people at this time outside of the regular forces into the activities of war, with some organization and effective discipline, they must go into the military service. They may be commissioned officers, but they must at least be enlisted men, and then it follows that what in ordinary civil life would be the job of a superintendent, or a foreman, or something of that sort, is only indicated in a military organization by some commission, and that the commission practically only determines this man's authority to do the work, and the scale of his pay. It is not a technical military rank in any sort of sense.

Gen. SQUIER. Yes, sir; he is made a colonel because he has a colonel's job in the organization. His title in some industrial or commercial organization in New York, for instance, would be, perhaps, general superintendent, or something like that.

Mr. GARRETT. I hear a great deal of criticism about these men, that some of them have offered their services, or have received commissions in the departments, not especially in yours, but in the Quartermaster's Department and in other bureaus; that when they are on the dollar-a-year plan, while acting, no doubt, from patriotic motives, yet back through it all runs a cord to their original place of employment, to some concern with which they are connected, and when there are recommendations to be made concerning articles to be bought, that these men always make a recommendation for their people. Have you run across anything of that kind?

Gen. SQUIER. No; not in my department.

Mr. GARRETT. There is quite a lot of it, I have heard, and I was wondering if you are watching out for that kind of people.

Gen. SQUIER. We are.

Mr. GARRETT. I do not think because a man gets \$75,000 salary, if he tenders his services in this work, he is an unpatriotic man. I think he is fairly patriotic, but still, at the same time, I am convinced that we are all more or less selfish, in a degree, and I have always looked with some degree of allowance upon those who are in these departments, who intended at the beginning to make money out of the war. Whether they will make it or not, is another question. There is no doubt in my mind that they intended to make money, and I was wondering if you were keeping the thumb screws on that thing.

Gen. SQUIER. We are. The slightest indication of anything of that sort would immediately be the cause of such a man separating himself from the service or selling out what he had.

If Col. Deeds will allow me, he had to sell out everything he had at Dayton. He had some little interest in an aeroplane factory before the war, helping the Wright Brothers, but he sold everything when he came with us. There is not a member of the Aircraft Board who has anything to do with any activities of that sort.

Mr. GARRETT. I imagine it might have been a good thing for the Government to have taken over these plants.

Gen. SQUIER. When he got through with them, he could contract with them. We are constantly on the watch for that. There may be some slips, but whenever any man is discovered doing anything of that sort, he goes out.

Mr. CALDWELL. In your department, General, have you a special corps or organization that looks after the packing of your material?

Gen. SQUIER. Yes, sir; we have a large corps of packers.

Mr. CALDWELL. Do they work in conjunction with the Quartermaster Department, or do they work separately?

Maj. JONES. We have depots scattered all over the country, as you know, and in these depots we employ packers. There are bureaus of the Government which have attempted, and are getting along very well in the standardization of packing boxes. No later than this morning I dictated a memorandum and sent out to each depot copies of the Ordnance Bureau's scheme of packing, and also

copies of a bulletin of the Bureau of Forestry on the uses of the different kinds of woods in the making of packing boxes, with the idea of developing a standard box.

It is going to be a very hard proposition for the Signal Corps to do that, because we handle such a mass of odds and ends.

In the Ordnance Department it is comparatively easy, but with us, we handle everything from telephones to aeroplanes. It is quite a proposition to make a standard packing box, but we are cooperating with the Bureau of Forestry and the men in the Quartermaster's Department and the Ordnance Department in an endeavor to develop one. We have them for our aeroplanes.

Mr. CALDWELL. The object of my inquiry was to see what the Signal Corps was doing toward trying to eliminate the loss of space as much as possible, because, of course, the shipping question is a big question.

Gen. SQUIER. The whole thing is coming back to ships, and we are always working with other departments in the packing proposition.

Mr. CALDWELL. The English, as I understand it, deliver their machines by the air route?

Gen. SQUIER. They do.

Mr. CALDWELL. We can not deliver ours by the air route, from America, yet?

Gen. SQUIER. Not yet.

Mr. CALDWELL. You are establishing a central depot at some place on the coast line, at which you will have a sort of reservoir?

Gen. SQUIER. We have several of them. That is all in the Army.

Mr. CALDWELL. From there, I presume, you will deliver by the air route, from that point?

Gen. SQUIER. We will deliver most of our planes by flying. We already occupy the flying field at Issondin, and we have some of our people already over there. In Texas now we fly from one end of the State to the other when necessary.

Mr. CALDWELL. We have had a pretty good description of what we are doing on the front, and then we have this statement as to how we are getting stuff up to the front and back to the original source. Have you had any difficulty in accumulating your supplies here?

Gen. SQUIER. You mean raw materials?

Mr. CALDWELL. Raw materials, manufactured stuff, and everything of that kind. Have you had any difficulty in accumulating those supplies by reason of any interference of the other departments? In other words, there has been some discussion in the other body of this Congress concerning the methods that have been adopted in the matter of getting our supplies. Has the Signal Corps been interfered with in any considerable degree, so that you would recommend a change in regard to that work.

Gen. SQUIER. The Signal Corps believes in the cardinal principle of cooperation, working with all agencies, in general. We have therefore constantly utilized all of the agencies I described, such as the lumber committee and the steel committee, and we have done it direct. We have not written many letters about it. We have got clearances by having a man who sits with those committees. You

can not win a war by the use of pieces of paper and a pencil. You have got to get the stuff you want and get it quickly.

Mr. ANTHONY. In other words, you have chopped out a considerable amount of red tape?

Gen. SQUIER. Yes, sir; I think we have. We have nearly 20 Ford cars in Washington, which add appreciably to our efficiency. When it is necessary to get something done we put an officer in one of these cars and have him go and get it done and stay with it until it is done. If he comes back that night, all right; if he does not get back until the next morning, that is all right, too.

Mr. CALDWELL. The conditions are improving, and you are only getting that by experience?

Gen. SQUIER. Yes, sir.

Mr. OLNEY. I notice that the Council of National Defense purchases supplies; do you depend, to any considerable extent, upon the Council of National Defense for the purchase of supplies?

Gen. SQUIER. No, sir. The Aircraft Board is, as I said, one of the most efficient organizations and one of the simplest organizations I have seen in Washington, and the wisdom of this committee in enacting a bill providing for the organization of that board made it so. You will remember you passed a bill creating the Aircraft Board, which did not create a large staff of civilians, with a number of rooms, duplicating what was already being done. You will see in that bill that what it amounted to was requiring cooperation between the Army and the Navy, requiring us to get together and throw everything that we have on the table, so that there is nothing duplicated. The wisdom of that bill provided for the organization of that board, which I regard as simple and very efficient, indeed.

The CHAIRMAN. Have all of the civilian members of that board been appointed?

Gen. SQUIER. No, sir; there is one vacancy, but he will be appointed soon. I think that board as it stands—there is no authority there to actually spend money—just makes us get together and throw the whole thing on the table. Suppose an expert arrives from France with a new device. Instead of going around a week trying to find somebody from whom he can get action, he is summoned before the Aircraft Board. Everybody is there, and if there is anything to say it is said at once. Whenever there is anything concerning the Navy in connection with aeronautics I have a vote on that, and Admiral Taylor, who represents the Navy on that board, has a vote on everything in relation to aeronautics that concerns the Army.

It is my experience that anybody who can get away with anything from that board which is camouflage has to be a wonder, because somebody will see through it. We have three naval officers and three Army officers and two civilians on the board, and I consider it a very efficient board. It practically gives you a workable department of aeronautics. You really have all of the aeronautics work thrown together right there, with the simplest kind of machinery to do the work, without duplicating anything at all.

Mr. ANTHONY. Then who makes your contracts?

Gen. SQUIER. We make our own contracts. We pass a resolution recommending that the Chief Signal Officer let the contract. If I choose not to do so, I suppose Secretary Baker would be the chief

umpire in the matter. I get the official advice of the board. I have not all the wisdom in the world, and I want all the advice I can get from everybody.

Mr. SHALLENBERGER. Are you asking for an appropriation for a deficiency this year?

Gen. SQUIER. Yes, sir.

Mr. SHALLENBERGER. How much are you asking for?

Gen. SQUIER. We can not give you the exact amount yet.

Mr. SHALLENBERGER. You are asking for an appropriation of \$1,138,240,314.77, and we gave you at the last session \$739,067,766, and you are asking for practically \$550,000,000 for bombs for your fighting planes, making a total of \$2,427,167,000 which you are asking for this year and the year to come.

Gen. SQUIER. Two years.

Mr. SHALLENBERGER. What amount of deficiency will you add to that?

Gen. SQUIER. I do not know just what it will be.

Mr. SHALLENBERGER. You have spent more than a billion and a half?

Gen. SQUIER. If your figures are correct, and that is in two years of war. That is a long while, in war.

Mr. SHALLENBERGER. You ask for maintenance of these different squadrons, and for the equipment of them in addition to that. That does not have anything to do with the purchase of machines, but to keep them in shape for use while they are fighting. Is there anything that has come to your knowledge, during the experience of three years of war in Europe, which has shown that any military position has been influenced by the battle plane? Is there anything to show that any battles have been won by the planes that have been fighting? Of course, we know about the tremendous efficiency of the observation machines, the scout machines. We know what they have done; but what I want to find out is whether there is anything to show whether any military positions have been gained by the use of those machines?

Gen. SQUIER. Here is the answer to that. It is very simple. Practically, we will say, 90 per cent of all of the artillery firing that is done on all the fronts is accomplished by the aid of the aeroplane spotter.

Mr. SHALLENBERGER. I am referring now to the money you are going to spend to get the machines with which you are going to do the fighting. That is where the big money is being spent.

Gen. SQUIER. That has never been done on the scale on which it is being done to-day and will be done in the future.

Mr. SHALLENBERGER. There has been a great deal of criticism of the Germans because they used this form of attack against other nations in attacking civilians and noncombatant towns and cities. Is there anything to warrant us in directly attacking military organizations, while not attacking cities?

Gen. SQUIER. Yes, sir; it is done all the time.

Mr. SHALLENBERGER. I have had it stated to me by foreign officers that in these big flying machines, carrying bombs, you can not drop them with accuracy so that you can tell whether you are able to gain or affect any military position, and that there is nothing to show that

the armies on the ground will not ordinarily defeat your operations in the air, and therefore that there will not be any particular military position gained by this form of attack. The question in my mind is whether we had not better spend this money for the men on the ground, and for reconnoitering machines, and whether or not this method of attack in the air is really achieving any military success, or gaining any military positions. I have been told that there has not been any particular advantage gained by that method of attack so far.

If there is anything to be gained by this method, why is it that it has not been done so far?

I will say further that I have been informed that there are already as many machines as you say you are going to have by the 1st of July on the battle line on both sides now. I believe there are about 2,500 machines in use by the allies now, and what I want to know is whether they have done anything that has had any material effect whatever on the result? Is it not a fact that these attacks which have been made on munition dumps, railroad stations, and places of that sort have not been the success that it was thought they would be?

Gen. SQUIER. It has been a decided success. My opinion is just the reverse of what you have heard.

Mr. SHALLENBERGER. That is what I wanted to know.

Gen. SQUIER. It is very important in a debatable subject like this to get the facts correct and to do some simple thinking and straight thinking.

Mr. SHALLENBERGER. That is what I am trying to get.

Gen. SQUIER. Suppose we look at it in this way.

We find at present an underground warfare, a grand burrowing match, the like of which has never been heard of. There are millions of men under ground. We also find an undersea war, developing as no one ever dreamed of, making whole sections of the North Sea dangerous. We also find that the surface of the ground, where we used to fight and move the Cavalry, is so torn up that you can hardly use foot troops at all on the ground. The surface of the sea is also out of the question.

Let us take an account of stock and see where we are. We can almost say that the underground warfare can not go very much further.

Mr. SHALLENBERGER. The point I am getting at is this. I realize what the general theory is, and that we can not go under the sea, and we can not go under the ground, and now we are trying the air; but has it not been found from military experience that this thing of attacking men on the ground who are armed and ready to fight has been a failure?

Gen. SQUIER. No, sir; I think it has been just the reverse.

Mr. GARRETT. I would like to have you give us some information as to what has been done.

Col. DEEDS. I have the confidential communiqués of the Royal Flying Corps, that have never been outside of our office. I will be glad to let each member of the committee look at the copy we have, and see exactly what the Royal Flying Corps has done. They had —— squadrons on the front daily. This shows what they have done.

Mr. ANTHONY. Granting that all that the colonel says is true, that these machines have been driven down, and that these depots have been attacked, what depot has been destroyed that you know of, actually, by aeroplane attack?

Col. DEEDS. You will find actually what has been done if you go through the communiques. We could easily get them together.

Col. ARNOLD. I could give you one good example of that. The town of Dunkirk has been largely destroyed by the Germans about six times.

Mr. ANTHONY. By what kind of fire?

Col. ARNOLD. By bombs dropped from Gotha planes.

Mr. ANTHONY. I thought the English have the mastery of the air. How did the German planes ever get to the town of Dunkirk?

Col. ARNOLD. The Germans at the present time have gotten supremacy of the air, so far as bombing machines are concerned. They have concentrated on that type of machine. If you will get Col. Bloomfield before the committee you will find what places have been destroyed and are being destroyed every morning. He can give you the amount of motor transports and everything else that has been destroyed in those depots.

Mr. ANTHONY. I think there is in the Washington Post of this morning a claim made by the English that they have the mastery of the air over there.

Mr. SHALLENBERGER. I have read about the town of Dunkirk and about the dropping of bombs. But those bombs do not necessarily strike the military defenses. They destroy houses, and they blow up the town, and they kill all kinds of noncombatant people, and that has been the general result of the air raids, so far as we know. I have been told by men in the business over there that it is practically impossible for a man flying in a machine at the rate of 125 miles an hour to avoid hitting anybody.

Col. DEEDS. Here is the record of one bombing squadron, beginning on the 31st of August. This was No. 100. It was a bombing squadron, and that is its record from the 31st of August to the 1st of September.

Mr. QUIN. Did they fire on any of the German troops and kill any German soldiers?

Gen. SQUIER. We have the best men of that type in the world right here in Washington. We have the men who have done these things, who have been sent here for duty in my office, and they are on duty in my office now. Summon Col. Lee and summon the French and Italian officers to tell you their experience as to what they have hit.

The CHAIRMAN. Have you the same English officers here now that you had when they appeared before this committee last year?

Gen. SQUIER. They are changing all the time. But those are men who have actually done these things.

Mr. KAHN. Only yesterday, or the day before yesterday, an announcement was printed in the newspapers that the cruisers *Breslau* and *Goeben*, former German raiders, now flying the Turkish flag, were absolutely destroyed by aeroplanes.

Mr. SHALLENBERGER. I want to know whether experience has shown that we are warranted in spending this amount of money for this purpose.

Mr. TILSON. Is not the best evidence of the destruction they do, what has been done on the English and the French sides? In those cases we know what has been done.

Mr. GARRETT. Have our men gone over the lines into the enemy country and done any bombing; and if so, what reports do they bring back?

Gen. SQUIER. Our airmen——

Mr. HULL. Here is No. 115. There are a half dozen instances of the dispersing of troops.

Mr. GARRETT. I was referring to our allies.

Gen. SQUIER. We have the daily bulletins——

Mr. SHALLENBERGER. You are asking for a tremendous sum of money from this committee. There has been, I think, a well-defined demonstration over there that this war, so far, has been fought on the ground, that the men fighting on the ground, and the Artillery, have been the two deciding factors so far. You bring a new factor into the situation that has not been tried, and you are asking for almost as much money for that proposition as is used for the Infantry and the Artillery together. I want to know whether or not there is any result, in the experience of war so far, to justify us in going so deeply into this untried field of battle fighting, when all of these other things have been demonstrated?

Gen. SQUIER. The best answer I can make to that is that we are doing what Gen. Pershing has asked us to do. This is not our program at all. My answer is that this is simply what has been asked for by Gen. Pershing.

Mr. SHALLENBERGER. In this matter of Signal Corps estimates, you have an item in there for wastage amounting to \$50,000,000. That is for a year's operations?

Gen. SQUIER. Yes, sir; it is 400 per cent.

Mr. SHALLENBERGER. You start in with the appropriation of last year, and you start with the necessary signal equipment, and that is to buy what? Why did you ask for \$25,000,000 more, with your equipment on hand, and then, starting in next July you are asking for \$50,000,000, which is enough to take care of all the year's wastage?

Why is not the amount of \$50,000,000, to take in all possible wastage, sufficient without the additional \$25,000,000? I can see why you need reserve, but why is that not included in the \$50,000,000 for wastage?

Gen. SQUIER. Let us take any particular date.

Mr. SHALLENBERGER. You have asked for an appropriation to supply your equipment, beginning with the first of the fiscal year, on the 1st of July. You have asked \$50,000,000 to make good the wastage during the year.

Gen. SQUIER. Yes; that material is destroyed four times during the year.

Mr. SHALLENBERGER. It takes \$12,500,000 for your supplies, and then you ask, in addition to that, for \$25,000,000, practically for reserve. Why is that not included in the wastage?

Gen. SQUIER. Simply because in war you must have at any one moment——

Mr. SHALLENBERGER. That would give you a fund of \$75,000,000.

Gen. SQUIER. Yes, sir.

Mr. SHALLENBERGER. Then, your wastage does not fairly cover your losses?

Gen. SQUIER. It is a question of the definition of wastage. I have shown you what it is, three months' supply in this country, and three months on the other side.

Mr. SHALLENBERGER. So far as defending that item is concerned, it looks to me as if you had better put that together.

Gen. SQUIER. Every word of that proposition came from Gen. Pershing's staff. These plans did not originate here at all. This offensive air program is Gen. Pershing's program, not mine.

Mr. SHALLENBERGER. I think that is a very important thing. I do not mean any reflection upon you at all. The men over there, who have been there for six or eight months, certainly have better chances to know what is needed than even you do, and if that came from the other side, I think it is an important thing that we have that in the record, that in submitting this program you are not relying on your own judgment, but taking the recommendations from the general staff of Gen. Pershing's forces.

Gen. SQUIER. The whole of this program came from Gen. Pershing's staff.

Mr. SHALLENBERGER. I think, after consideration, I will rather modify my opinion. I will say in reference to the matter of the officers that I was talking about a while ago, that I am satisfied that Col. Deeds is worth whatever he has had, and the reason I brought that matter up was because so many of us have had the cases of men who want to go into the schools and they see the cases of all these other men who have been commissioned without going to the schools, and they object to it.

Gen. SQUIER. That is inherent.

Mr. SHALLENBERGER. You will remember that Mr. Coffin, the chairman of the Aircraft Board, came before our committee and gave us a very glowing picture of the number of machines you were going to have on the front lines next summer. As I recall, the number he gave was 18,000 machines, and his statement was that you were ahead of your program, and that everything was going to be exactly as your program required.

Gen. SQUIER. I do not recall that testimony at all.

Mr. SHALLENBERGER. I know I made the statement that your department was the first one that had come to us and said that you knew what you were going to do. He told us about this battle-plane program, that they could not go much further with the campaign of underground warfare or of undersea warfare, and that you were going to fly over these enemy lines and blow up the tracks and smash the communication lines, and thus force the Germans to retreat. That sounded very good to me, but after I had talked with men who have had experience over there, I have been told that that can not be done when the enemy knows you are coming.

Gen. SQUIER. All our experience——

Mr. SHALLENBERGER (interposing). I am very much in favor of the plan.

Gen. SQUIER. In night bombing, in particular, where you do not have to fight, you are practically immune from being attacked.

Mr. SHALLENBERGER. But you can not tell what you are hitting.

Gen. SQUIER. The great city of Metz, for illustration, is very close to the line. If we had even 50 bombing machines every day, or even 10 every night, we could simply go after them, and we could move no man's land back 150 miles, where the dumps are kept now, outside of the artillery range. We have never yet, however, had enough machines.

Mr. SHALLENBERGER. Can you tell the committee that there is anything to warrant you in believing that you are going to do it?

Gen. SQUIER. When we have the quantity—

Mr. OLNEY. At any time would you be in danger of destroying hospitals and killing civilian noncombatants?

Gen. SQUIER. We would attack military things only.

Mr. CALDWELL. I want to ask you something in reference to the Ordnance Corps. The representatives of the Ordnance Department made an estimate, based on a statement made by you. We have here a confidential schedule of it. They asked us for drop bombs, marked "1," 3,750 per squadron per month, making a total of 309,375, and on the second page there is an estimate of 247,500, and so in the details of each page there is a difference.

This schedule was given to us at the beginning of our hearings, and I wondered if your corps had prepared a supplemental estimate to cover that ground; and if so, have you that supplemental estimate handy?

Gen. SQUIER. Mr. Sherley has asked me to appear before the Committee on Appropriations this afternoon to clear up the question of bombs.

Col. DEEDS. Data is being prepared taking into consideration Gen. Pershing's request, approved by the general staff on the other side, giving a statement of the number of bombs per plane. We are making a modified schedule of our own that we will have before this afternoon, which is based on our very latest information on the subject, and we will get that and let you have it.

Gen. SQUIER. On the 3d of January Gen. Pershing sent us the number of bombs he wanted. Every bit of this comes from him. This is not our plan.

Mr. CALDWELL. Could you put that into the record?

Gen. SQUIER. The number of bombs?

Mr. CALDWELL. The number of bombs, and the estimated cost. The matter I referred to just now is what we have in the record at this time. I was under the impression that the large program we have been talking about is so much larger than that, that that would be misleading.

Gen. SQUIER. We will correct it, by all means.

The CHAIRMAN. I am going to ask you, General, to put into the record the detailed statement in regard to the items for the Aviation Section, as you told us yesterday, with an explanation of each item, similar to the explanation you have given with reference to the Signal Corps proper, which you have given this morning.

Gen. SQUIER. I will be glad to do so.

Mr. GREENE. This is to prepare the way to answer some question that will probably be asked on the floor.

There seems to be an impression that each type of aeroplane requires a distinct type of engine, but I had the impression that the Liberty engine was adaptable to any type of plane.

Gen. SQUIER. That is perfectly true; the Liberty engine is adaptable to the various types of planes. It flies the De Haviland, the Bristol, and the Handley Page machine. It also flies every boat of the Navy, and will probably go into some of the planes we are buying from France, or rather some of those that Gen. Pershing has bought for us.

We go to Europe with one engine, and we can get the spares from any of our shops or ships.

We are going to reduce the number of 30 men required for each machine, because we have a simple engine. We can multiply the engine three times and thus we can get 1,200 horsepower to a machine. That is what Germany has done. She started out with the Mercedes engine, and she has it yet. All of the allies have 30 or 40 different kinds, and that does not make for the efficiency of the air campaign.

Mr. GREENE. Another question suggested was that if we standardized to a certain plane that is, perhaps, below 100 per cent of the greatest efficiency of some distinctive plane we might make, whether we would be losers because of the possible advantage in the employment of some one of those superior machines. I tried to express this idea about it. I tried to argue in general terms that if we had a plane and an engine that could be depended upon to be up in the air 20 hours out of every day, and always there, we would accomplish at the end of a month more actual destruction than we would if we had various kinds of special machines which might or might not go up now and then, and that an average of this effective offensive, maintained consistently and persistently, day by day, would be greatly effective. That is a question which relates to strategy, and it was asked me.

Gen. SQUIER. There are various kinds of planes for various purposes. The plane with the last mile to it, the very last mile, is sure to win, but there are few planes in France with the last mile. The standard quantity plane, however, is good for night bombing, where you are not attacked at all, and enables you to accomplish enormous results, commensurate with the number of planes you have, even though you have not got the last mile, because you do not need it. You are protected by the few very speedy machines, and you now travel in groups, in regular formation.

Col. DEEDS. I have here, dated December 31, a confidential table of the performances of all the British aeroplanes. There is given the types of planes they have in service, and with all that variety they are trying to do the work.

Mr. GREENE. Then it comes down, for the purpose of the lay mind, to the fact that as a practical military offensive, a machine that is humanly certain to go up and will go up day by day will be furnished in sufficient quantities, so that there will be enough to go up and enable you to accomplish more destruction than you would with some superior machine, not so great in number, whose certainty is not to be depended upon at all?

Gen. SQUIER. Exactly. We always have a few high-speed machines.

Mr. TILSON. What sized bombs do you calculate dropping; as heavy as 500 pounds?

Col. ARNOLD. The English are dropping 500-pound and 250-pound bombs.

Mr. TILSON. I see that there is a bomb here that the Ordnance Department is preparing, the weight of which is 500 pounds.

Col. ARNOLD. They carry the larger ones only in exceptional cases, the average is 25 or 50 pounds, and they carry some 125 and 250 pound bombs.

The larger number of bombs are those weighing from 100 to 250 pounds. They use the observation planes for bombing, to a certain extent.

Mr. TILSON. How about the incendiary bombs? Those are standard size bombs, the same weight, but simply containing ignition material instead of explosives—is that correct?

Col. ARNOLD. Yes, sir.

Mr. TILSON. Are you preparing to use a great number of those in your work of destruction?

Col. ARNOLD. Our bombing program is outlined by Gen. Pershing's requirements in the field, and we are giving him the number of bombs he has asked for. It includes all kinds.

Gen. SQUIER. We have a cablegram from Gen. Pershing telling us what he wants.

Mr. GARRETT. In your night attacks, do certain of the aeroplanes carry searchlights, or any kind of light, giving the other people a chance to see them?

Gen. SQUIER. In London they have special planes, which are painted in black.

Mr. SHALLENBERGER. You are laying out a larger program in the use of bombs than has been proposed up to date. Is there a possibility that in building up that program, you have reduced the program for maintaining the aeroplanes, and that there is a possibility that you will not be able to do that, and that the Germans will be able to fight or destroy your observation planes?

Gen. SQUIER. Every angle and phase of this proposition has been considered by the allies for a number of months. It was only in September, after conferences held in Paris, that this program was agreed upon. We have the strongest kind of mission in Paris, who meet with these men all the time.

Mr. SHALLENBERGER. Mr. Taylor, of Colorado, talked to us about the situation on the other side. He stated specifically that he had been told that if we sent over large machines with a speed of less than 150 miles per hour, we will be wasting our time, and that the Germans already are building battle planes and fighting planes that will drive our machines out of the way.

Col. DEEDS. The answer to that is the report of December 31.

Gen. SQUIER. It is just the difference between conversation and facts.

Mr. MCKENZIE. When you were before our committee on a former occasion, and I think also when Mr. Coffin and his associates were before us, asking for some authority to organize the Aeronautical Board, the question of royalties was inquired into, and I think it was stated at that time that matter was in process of adjudication, and I think you stated you expected to have it settled by the payment of a lump sum for all the patents. Have you succeeded in getting a settlement of that matter, or is it still in abeyance?

Gen. SQUIER. The whole patent situation is at the disposal of the committee, including everything that has been done in reference to

it. At the present time it is closed. To go into it thoroughly would take us an hour or so. We have not paid a cent out yet on that agreement. It is considered as an item of cost.

Col. DEEDS. There has not been anything paid out as an item of cost.

Mr. SHALLENBERGER. Have you agreed on the contracts?

Col. DEEDS. The whole thing revolves about the cross-license agreement.

Mr. QUIN. Mr. Coffin made a definite statement to this committee in regard to it; has that been complied with?

Mr. McKENZIE. He thought the whole matter could be settled for about a million dollars, for all the European patents, and a payment to the Wright Bros. It is possible that some of the Members of the House, not very friendly to this program, might ask how much royalty is being paid the Wright Bros.; how much are we paying on the patents.

Gen. SQUIER. We have the whole thing right here, stated in full. It might save your time if I were to read it.

Mr. McKENZIE. I think it ought to go into the record.

(The matter referred to is as follows:)

MANUFACTURERS AIRCRAFT ASSOCIATION (INC.).—CROSS-LICENSE AGREEMENT AND LICENSE.

[July 24, 1917.]

CROSS-LICENSE AGREEMENT.

This agreement, made this 24th day of July, 1917, between the Manufacturers Aircraft Association (Inc.), a New York corporation (hereinafter called the "Company"), party of the first part, and each person, firm or corporation (hereinafter called the "Subscriber" or "Subscribers") as shall become stockholders of the said "Company" in the manner and under the conditions provided in the by-laws thereof (which for the purpose of this agreement are made a part hereof), and become parties to this agreement, parties of the second part;

Whereas, the parties hereto are interested in the manufacture, sale, and use of airplanes, as hereinafter defined, and desire to promote and develop the industry in which they are engaged, and to encourage and advance the art applicable thereto; and

Whereas, the said development and advancement in the past have not been capable of as complete accomplishment as is desirable, because of the existence of certain United States patents claimed to be basic in their nature, upon which suits have been brought, or threatened, for alleged infringement and for the collection of royalties and damages in connection therewith; and

Whereas, it is desired to prevent and avoid such litigations or threatened litigations in the future and to give to all of the "Subscribers" the right to manufacture, sell, and use airplanes embodying the inventions of each of the "Subscribers" and to that end it is desired that licenses be granted as herein expressed:

Now, this agreement witnesseth:

That for and in consideration of the premises, the covenants, and conditions herein contained, and of other good and valuable considerations moving between the "Company" and each of the "Subscribers" hereto, and between the "Subscribers" themselves, it is covenanted and agreed as follows:

I. DEFINITIONS.

The word "airplane," as used in this agreement, shall be understood to mean any form of heavier-than-air craft using wing surfaces for sustaining it, and to include propelling means, propellers, propeller hubs, radiators, and all parts and accessories used or useful in the airplane except the engine and its accessories.

The words "airplane patent," as used in this agreement, shall be understood to mean any patent covering inventions for or capable of use in or in connection with airplanes, including propellers, propeller hubs, radiators, and all parts of airplanes and accessories used or useful in the airplane, except the engine and its accessories.

II. LICENSES AND POWERS GRANTED.

The "Subscribers" grant, agree to grant, and cause to be granted to each other, licenses to make, use, and sell airplanes—under all airplane patents of the United States now or hereafter owned or controlled by them or any of them, or by any firm, corporation, or association owned or controlled by them, or under which they, or any of them, or any such firm, corporation or association, have or shall have the right to grant licenses—in and throughout the United States, its territories, and dependencies, for use therein or abroad, except that no rights, express or implied, are hereby granted under any foreign patents, nor shall said rights or the licenses, herein provided for, apply to or include the use of said patents in their application to other than airplanes, and except further that no licenses are hereby granted under the Dunne patents No. 975403, issued November 15th, 1910, and No. 1003721 issued September 19th, 1911, rights under which are held by the Burgess Company.

All licenses provided for herein shall run to the full end of the term of the letters patent under which the license is or is to be granted and shall be personal, indivisible, nonassignable and irrevocable, except for the causes and in the manner hereinafter stated.

The "Subscribers" hereby designate, constitute, and appoint the "Company" (and the "Company" hereby accepts the appointment) as their true, sufficient, and lawful agent and attorney in fact, for them and in their respective names, to make and execute licenses in writing in the form hereto annexed, and to deliver the same to those of the "Subscribers" who, at the time, are stockholders of the "Company" not in default hereunder, and who shall have executed an agreement in writing of like tenor to this; and to enforce said licenses and any and all other obligations (including the obligation to make payments) of the "Subscribers" under this agreement; and the "Subscribers" hereby give and grant unto said "Company" as full, complete and ample power and authority in the premises as the "Subscribers" themselves now have and possess.

All licenses provided for herein, when made, executed, and delivered in accordance with the provisions hereof, shall have the same force and effect as if they had been executed and delivered by the "Subscribers" themselves.

III. COVENANTS OF FURTHER ASSURANCE.

(a) Each "Subscriber", now or hereafter, having rights under any United States airplane patent or invention, of such character that it has legal right and power to procure the grant of rights thereunder to others, but is not itself empowered to grant such rights, covenants to procure the execution of such further instrument as may be necessary to empower the "Company" to grant rights under such patent, or with reference to such invention, to the extent and in the manner herein provided.

(b) Each "Subscriber" covenants that it will not contract for or obtain any rights under any such patent or invention in such manner that its owner would be prevented from granting to other "Subscribers" hereto similar rights on the same terms, unless the "Subscriber" obtains, at the same time, the further privilege to grant rights under said patent or said invention whereby the same may and will be brought under the operation of this instrument.

IV. COVENANTS AGAINST OTHER LICENSES.

Each "Subscriber" covenants that it has not heretofore entered and will not hereafter enter into any contract or arrangement, whereby its privileges under United States airplane patents, issued or to be issued, inventions, and rights, owned or controlled by it, have been or shall be diminished or surrendered so as to exclude or restrict the operation of this instrument in respect thereto. Each "Subscriber" further covenants that it will not grant licenses under any such patents for use in airplanes, with reference to which it is receiving royalties hereunder, to any other person, firm, or corporation on more favorable or lower terms of royalty than those herein provided or which may become more favorable or lower during the term of such license.

V. AFTER ACQUIRED PATENTS.

When a "Subscriber" shall hereafter acquire a United States airplane patent, or any right thereunder, he shall be entitled to compensation for the use thereof if the patent or patent right covers an invention which secures the performance of a function not before known to the art, or constitutes an adaptation for the first time to commercial use of an invention known to the industry to be desirable of use but not used because

of lack of adaptation, or is otherwise of striking character or constitutes a radical departure from previous practice, or if either the price paid therefor or the amount expended in developing the same is such as to justify such compensation, provided that at the time said patent or patent right is reported to the "Company," as required in subdivision (b) of Paragraph VII, the "Subscriber" claims such compensation, and states the grounds on which such claim is based. Such report and claim shall be submitted to a Board of Arbitration to be selected in the manner provided for in Paragraph XLII hereof, which Board shall determine whether such compensation shall be paid, and, if so, the total amount thereof and the rate of royalty, or other payments, which shall be paid (towards such compensation) by any "Subscriber" desiring and taking a license under said patent and shall also fix the time or times when said royalties or other amounts shall be paid.

VI. SPECIAL MODELS.

If any "Subscriber" shall have developed the design and manufacture of any special model of airplane, or airplane engine or other device used in an airplane (except the airplanes manufactured by the Burgess Company under the Dunne Patents hereinbefore mentioned, and the Hispano-Suiza aeronautical engine manufactured by the Wright-Martin Aircraft Corporation or its subsidiaries), which the United States Government may at any time desire to have manufactured in the factory of any other "Subscriber" or in the factory of any manufacturer not a "Subscriber" hereto, the said "Subscriber" agrees that it will furnish to the other "Subscriber" or said other manufacturer such complete specifications, drawings and other production data, as may be required, for use in the manufacture of such special model, provided that and upon condition that the "Subscriber" or other manufacturer in whose factory the work is placed by the United States Government shall agree with said Government and with the "Subscriber" owning said specifications, etc., to pay and shall pay into the treasury of the "Company" one per cent upon the contract price paid by the Government for each airplane or airplane engine or other device manufactured for it in accordance with said specifications, etc.

If the manufacture of such special model is conducted by one not a "Subscriber," such manufacturer shall also agree to pay into the treasury of the "Company" such such royalty as a "Subscriber" would have been obliged to pay had it made and sold the airplane, engine or other device, including the amount specified in subdivisions (a) and (b) of Paragraph VIII hereof, if an airplane with or without engine, is the thing manufactured for and sold to the Government.

VII. REPORTS TO THE "COMPANY."

The following reports in writing shall be rendered to the "Company" by each "Subscriber" at the time or times hereinafter set forth:

(a) At the time of the execution of this agreement each "Subscriber" shall report all United States airplane patents and inventions together with serial numbers and filing dates of all pending applications for such patents, and all rights under such patents and inventions then owned or controlled by it, but no omission from such report shall exclude the patent, application or right so omitted from the operation of this agreement.

(b) Within 30 days after the acquisition by any "Subscriber" of any United States patent (other than patents to be issued upon inventions now owned by it) or right within the scope of this agreement, each such "Subscriber" shall report such acquisition together with all the facts known to it as to such patent or right and its manner of acquisition. If such "Subscriber" claims that additional compensation should be paid to it for licenses under such patent or right, it shall so claim in its report.

(c) On the 10th days of January, April, July and October in each year, each "Subscriber" shall report the number of airplanes (with or without engine), sold and, delivered by it, together with the names of the purchasers, and the dates of delivery or put into use for other than experimental or development purposes, or shipped out of the United States, during the three preceding calendar months.

(d) On the 10th days of January, April, July, and October in each year, each "Subscriber" shall report the number of airplanes, airplane engines, or other devices for use in airplanes, which it has sold and delivered during the preceding three calendar months, made from specifications, drawings, and other production data obtained from any other "Subscriber," as provided in Paragraph VI hereof, together with the sales price and the dates of delivery; and there shall be included in the same report a copy of any agreement which the "Subscriber" shall have made with another manufacturer as provided in said paragraph.

(e) Each license to other than "Subscriber" as provided in Paragraph IV hereof, shall be reported within 30 days after its delivery.

The first of each of the reports specified in subdivisions (c) and (d) hereof shall be made by each "Subscriber" on the tenth day of January, April, July, or October first occurring after it has become a "Subscriber" hereto, and shall cover the period from July 1, 1917, to the first day of the month in which the report is due.

Each of the "Subscribers" hereto shall keep separate books of account showing all business done under or subject to the operation of this agreement. The "Company" may at any time have a New York Certified Public Accountant, to be designated by it, audit such books of account of the "Subscribers," together with such other accounts as the accountant may deem necessary, in order to verify or correct the reports herein provided for, and the "Company" shall have such audit made when any "Subscriber" so demands. Such audit, however, shall be limited to ascertaining whether the reports herein provided for are properly made and to correcting the same, if necessity for correction shall appear. No information obtained from any such audit shall be reported by the accountant or given to any of the parties hereto, except as it directly applies to the reports required by this agreement.

VIII. PAYMENTS TO THE "COMPANY."

Each "Subscriber" agrees to pay into the treasury of the "Company" on the 10th days of January, April, July, and October in each year the following sums of money, to wit:

(a) On each airplane, with or without engine, required to be reported as provided in subdivision (c) of Paragraph VII hereof, the sum of two hundred dollars until such time as the Wright-Martin Aircraft Corporation and the Curtiss Aeroplane and Motor Corporation shall have been paid the aggregate sums provided for in subdivisions (a) and (b) of Paragraph IX hereof.

(b) On each airplane, with or without engine required to be reported as provided for in subdivision (c) of Paragraph VII hereof, such sum not to exceed twenty-five dollars, as the Board of Directors of the "Company" may, from time to time, fix and determine as payable after the above-mentioned aggregate sums shall have been paid to the Wright-Martin Aircraft Corporation and the Curtiss Aeroplane and Motor Corporation.

(c) Such amount or amounts as the Board of Arbitration may specify as special compensation for after acquired patents as provided in Paragraph V hereof, and required to be reported in subdivision (c) of Paragraph VII.

(d) Such amount or amounts as may be payable with reference to the use of specifications, drawings, and data as provided in Paragraph VI hereof, including the royalty payments therein provided for, but all one (1%) per cent payments on account of the use of such specifications, drawings, and data covering any one model shall cease when the total paid by all users shall aggregate Fifty thousand (\$50,000) dollars.

(e) All royalties received under licenses referred to in subdivision (e) of Paragraph VII.

Each "Subscriber" who shall become a party hereto after the first day of July, 1917, shall on the 10th day of January, April, July or October next occurring pay to the "Company" those amounts which it would have been obliged to pay in accordance with the foregoing if it had been a "Subscriber" on July 1, 1917.

Moneys paid into the treasury of the "Company" pursuant to any provisions hereof shall not be or constitute or be deemed to be or constitute the assets, property or profits of said "Company," but shall be received and disbursed by it as the agent and attorney in fact of the "Subscribers" in the manner and for the purposes herein mentioned.

IX. PAYMENTS BY THE "COMPANY."

Out of the moneys paid into the treasury of the "Company" pursuant to the provisions hereof, the following payments shall be made by the Company on the 20th days of January, April, July, and October in each year, to wit:

(a) To the Wright-Martin Aircraft Corporation One hundred and thirty-five dollars (\$135) on each airplane with or without engine, with reference to which payments shall have been made in accordance with subdivisions (a) and (e) of Paragraph VIII hereof, during the preceding three calendar months, until U. S. Patent No. 821393 issued May 22, 1906, shall have expired, or until the aggregate sum of ——— dollars shall have been paid to the said Wright-Martin Aircraft Corporation when all payments to it hereunder shall cease, except as hereinafter provided.

(b) To the Curtiss Aeroplane and Motor Corporation Forty dollars (\$40) on each airplane, with or without engine, with reference to which payments shall have been made in accordance with subdivisions (a) and (e) of Paragraph VIII hereof, during the preceding three calendar months, until such time as the Wright-Martin Aircraft Corporation shall have been paid in full as provided for in subdivision (a) of this paragraph, after which there shall be paid to the Curtiss Aeroplane and Motor Corporation at the times herein mentioned the sum of One hundred and seventy-five dollars (\$175) on each of said airplanes until the aggregate sum of ——— dollars shall have been paid to it or until U. S. Patent No. 1203550, issued October 31st, 1916, shall have expired, when all payments to it hereunder shall cease, except as hereinafter provided.

(c) To each of the "Subscribers" entitled thereto such amounts as may have been paid to the "Company" with relation to the use of after acquired patents in accordance with subdivisions (c) and (e) of Paragraph VIII hereof.

(d) To each of the "Subscribers" entitled thereto such amounts as may have been paid to the "Company" on account of the use of specifications, drawings, and data as provided in Paragraph VI and in subdivision (d) of Paragraph VIII hereof, but any royalty payment received from outside manufacturers shall be distributed as though received from "Subscribers."

(e) To any "Subscriber" who shall have granted licenses to others than "Subscribers," as provided in Paragraph IV, the royalties received under such licenses which are not required for payments provided for in subdivisions (a), (b), and (c) of this paragraph.

Out of the balance of said moneys paid into the treasury of the "Company" under this agreement, the "Company" may retain and use sufficient to cover its operating expenses and to create such fund as, in the judgment of the Board of Directors of said "Company," shall be necessary and proper for the further development of the airplane art and industry, and the purchase of patents and rights for the benefit of the "Subscribers" hereto.

If after making the payments and reservation herein provided for, any surplus or balance remains out of the funds so paid into the treasury of the "Company," the same shall be distributed by the "Company" from time to time, among those "Subscribers" who have contributed to said moneys, in proportion to their respective contributions under subdivisions (a) and (b) of Paragraph VIII other than those required for payments under subdivisions (a) and (b) of this Paragraph IX.

X. BREACH OF AGREEMENT.

In the event that any "Subscriber" is claimed by the "Company," or any other "Subscriber," to be in default in the performance of any of its obligations hereunder, and such claimed default continues after thirty days' notice in writing, by the "Company" or any "Subscriber" hereto, to the "Subscriber" claimed to be in default, then the Board of Arbitration, hereinafter provided for, shall determine whether there has been such specified default and if such default is found to exist, shall fix the time within which it must be repaired, and shall assess such damages and impose upon the "Subscriber" in default such other requirements (including the forfeiture of its stock and license) as may seem to the said Board of Arbitration to be proper under the circumstances. Each "Subscriber" covenants and agrees that it will pay such damages and comply with such requirements as may be specified by the said Board of Arbitration.

Nothing contained in this paragraph shall deprive the "Company" of the power to make, execute and deliver licenses under the patents or patent rights owned and controlled by any defaulting "Subscriber," or to which the "Subscriber" may be entitled, at the time he ceases to be a stockholder or "Subscriber," nor deprive other than defaulting "Subscribers" of any right which they may have received to the use of the said patents or patent rights.

XI. WITHDRAWAL FROM AGREEMENT.

Any "Subscriber" may withdraw from this agreement at any time after ten years from the date hereof, on giving to the "Company" written notice of its election so to do and on fulfilling all of its obligations up to the date of such withdrawal. But no withdrawals shall relieve the other parties and other "Subscribers" from their obligations to each other hereunder, nor deprive them of their rights acquired under the patents and patent rights owned or controlled by the withdrawing "Subscriber" at the time of withdrawal, all of said patents and patent rights remaining under this

agreement, but such withdrawing "Subscriber" shall cease to have any rights under the patents of the other "Subscribers" hereto, or any other right under this agreement, from and after such withdrawal.

XII. REPURCHASE OF STOCK.

In the event of the death of any person who is a stockholder in the "Company," or in the event of the dissolution of any corporation or firm which is a stockholder therein, or in the event of the bankruptcy or insolvency of any such stockholders, or in the event of withdrawal under Paragraph XI hereof, the "Company" shall have the right to purchase for the benefit of the other "Subscribers" the stock held by such person, firm or corporation at a sum not to exceed the distributive share or shares of such stockholder in the funds held by the "Company," and the license or licenses issued to such stockholder shall be surrendered to the "Company" and cancelled.

XIII. ARBITRATION OF CLAIMS AND DISPUTES.

In case of any dispute or controversy between the "Subscribers" hereto, or between the "Subscribers" and the "Company," or in case of a claim by a "Subscriber" for special compensation for licenses under patents or rights hereafter acquired by it, or in case of breach of this agreement, the said dispute, controversy, claim or breach shall, within thirty days after a "Subscriber" or "Subscribers" shall have given notice to the "Company" or the "Company" shall have given notice to the "Subscribers" thereof, be referred to a board of disinterested Arbitrators consisting of three persons, for determination.

In the case of a claim for special compensation, one member of such Board of Arbitration shall be appointed by the Board of Directors of the "Company," another by the "Subscriber" making the claim and the third by the other two arbitrators.

In the case of any dispute between the "Company" and a "Subscriber" or "Subscribers," one member of the Board of Arbitration shall be appointed by the Board of Directors of the "Company," another by the "Subscriber" (or if more than one "Subscriber" is involved in the same dispute, then by a majority of those so involved) and the third by the other two arbitrators.

In case of a breach of this agreement asserted by the "Company" or a "Subscriber" against another "Subscriber," one member of the Board of Arbitration shall be appointed by the Board of Directors of the "Company," another by the "Subscriber" against whom the assertion of breach is made and the third by the other two arbitrators.

If either the Board of Directors or the "Subscribers" fail to appoint a member of the Board of Arbitration within the time specified the other party or parties may appoint such member or fill such vacancy.

The decision of a majority of the members of said Board upon all matters submitted to them for adjudication shall be final and binding upon all the parties hereto.

XIV. RELEASES TO "SUBSCRIBERS."

The "Subscribers" hereby waive and release any and all claims which they or any of them may have had against each other for damages and profits on account of any infringement or alleged infringement, prior to July 1, 1917, of any patent included within this instrument in the manufacture, sale, or use of airplanes.

XV. BINDING UPON PARTIES, CONTROLLED COMPANIES, LEGAL REPRESENTATIVES, ETC.

This agreement is binding upon the parties hereto and their several successors, legal representatives, and assigns, but shall enure to the benefit of only their several successors in business. Each "Subscriber" agrees that all persons, firms, and corporations now or hereafter controlled by it, and engaged in the manufacture of airplanes, or owning or controlling United States airplane patents, shall be caused to execute this agreement.

XVI. EXECUTION OF AGREEMENT.

This agreement may be executed by the "Subscribers" in any number of counterparts, but when so executed shall constitute but one and the same agreement, and shall be as binding, and of the same force and effect, as if all the "Subscribers" had executed but one and the same instrument, and as if all executions had been at the same time.

In witness whereof, the parties hereto have executed this instrument as of the day and year first above written.

MANUFACTURERS' AIRCRAFT ASSOCIATION (INC.),
By _____, *President*.

Attest:

_____, *Secretary*.

Attest:

LICENSE.

License, granted this _____ day of _____, 1917, by the _____ (hereinafter called the Licenser), to _____ (hereinafter called the Licensee).

Whereas, the Licenser and certain other stockholders of the Manufacturers Aircraft Association (Inc.), (hereinafter called "Subscribers") heretofore, entered into a certain agreement dated July 24, 1917, entitled "Cross License Agreement" (a copy of which is hereto annexed), wherein and whereby the Licenser agreed to grant certain licenses to the other "Subscribers;" and

Whereas, the said agreement also authorized and empowered the Manufacturers Aircraft Association (Inc.), as the agent and attorney in fact of the Licenser, to make, execute, and deliver such licenses in the name of the Licenser; and it is desired to execute the powers therein granted;

Now, this license witnesseth:

That for and in consideration of the premises and other good and valuable considerations moving between the parties hereto, it is covenanted and agreed as follows:

1. The Licenser does hereby give and grant unto the said Licensee the unrestricted but nonexclusive license to make, use and sell airplanes—under all airplane patents of the United States now or hereafter owned or controlled by it, or by any firm, corporation or association owned or controlled by it, or under which it or any such firm, corporation, or association have or shall have the right to grant licenses—in and throughout the United States, its territories, and dependencies for use therein or abroad, except that no rights, express or implied, are hereby granted under any foreign patents, nor shall the licenses herein provided for, apply to or include the use of said patents in their application to other than airplanes, and except further that no licenses are hereby granted under the Dunne patents, No. 975403, issued November 15, 1910, and No. 1003721 issued September 19, 1911, the rights under which are held by the Burgess Company.

The patents; the patents to issue on inventions; and the agreements with reference to which the Licenser has a right to grant licenses at the present time, and which are intended to be included in this license are set forth in Schedule "A," hereto annexed.

2. This license shall run to the full end of the term of the Letters Patent under which the license is or is to be granted, and shall be personal, indivisible, nonassignable and irrevocable, except for the causes and in the manner set forth in the "Cross License Agreement" hereinbefore referred to.

3. This license is made subject to all the terms, conditions, covenants and agreements contained in said "Cross License Agreement," which is made a part hereof with the same force and effect as if herein set forth at large.

In witness whereof, the parties hereto have caused this instrument to be executed as of the day and year first above written.

By MANUFACTURERS AIRCRAFT ASSOCIATION (INC).

Attest:

_____, *President*.
_____, *Secretary*.

As Agent and Attorney in fact of the Licenser.

Attest:

_____, *President*.
_____, *Secretary*.
_____, *Licensee*.

SCHEDULE A.

I. PATENTS AND INVENTIONS.

Patents No.	Issue date.	Title of invention.

II. PATENT APPLICATIONS.

Serial No.	Filing date.	Other data.

III. PATENT RIGHTS, LICENSES, ETC.

Nature of right.	Inventions.	Date of agreement.

Mr. ANTHONY. Have you agreed on the lump sum?

Col. DEEDS. No, there has been no agreement on the lump sum. The cross licensing agreement, you gentlemen will recall, stipulates that a total of \$200 per plane is to be paid, a portion to the Wright-Martin Co., and a portion to the Curtiss Company, up until a total of \$4,000,000 is paid—\$2,000,000 to the Curtiss Corporation, and \$2,000,000 to the Wright-Martin Corporation. All the facilities are thus pooled, and all patent litigation closed.

This proposition was referred to the Attorney General, who sent back a report saying that the cross licensing agreement was a valid agreement. Then the air craft board asked a committee of patent attorneys to investigate this entire matter and submit their report to the board. That committee returned its report last week. I have not read it, and I do not think Gen. Squier has read it yet, but as I understand it, it is to the effect that there were valid patents, and that in addition to the settlement of the patent litigations, it was a good business proposition for the Government to go into, in that it settles for all time all of this controversy over patents. That is the gist of the report of the committee of patent attorneys, which, I am sure, we will be glad to get before this committee.

Mr. HULL. What is it about the aeroplane that the patent is on?

Col. DEEDS. There are several hundred patents on aeroplanes.

Mr. HULL. Is there a valid patent?

Col. DEEDS. The valid patent, as I recall, is that on the ailerons and the lateral control, the entire control of the aeroplane, which is the fundamental patent of the Wrights.

Mr. HULL. What do the Curtiss people have?

Col. DEEDS. They have a lot of flying-boat patents, used by the Navy, and a great many structural patents, without which we could not build the modern plane. The Wrights did the original work, but it was the Curtiss people who did the development work.

Mr. HULL. If I remember Mr. Coffin's testimony before the committee, it was to the effect that the Curtiss people did not have a fundamental patent, but that it was good business policy to give them something, because they had developed something, or had been in the game, and been good fellows.

Col. DEEDS. I think probably there is something to that side of it. The Wright patents undoubtedly are more fundamental than the Curtiss patents. Those were the things put up to the committee of attorneys who investigated the matter and made a report.

Mr. HULL. Do you think we could defend on the floor of the House the payment of money to somebody simply because they had been good fellows and had developed something?

Col. DEEDS. I do not know what your position would be on that. I see the other side of it, from the practical business standpoint. In that case, everybody was in litigation, and this was found to be a way to close the thing out. I do not know what the results would be if there was no cross-licensing agreement. I think we would have a lot of difficulty in getting aeroplanes at the present time. The fact is that so far, in connection with our cost plus contracts, no money has yet been paid by the Government on this.

Mr. HULL. Is there any agreement to pay?

Col. DEEDS. The Government has agreed to save the contractors harmless from any expense that may arise out of this cross-licensing agreement, because we could not get the contractor to go ahead if he was liable to litigation.

Mr. HULL. As I understand it, then, the Government is responsible for the payment of about \$4,000,000 for patents?

Col. DEEDS. No, it is not responsible. The Government will stand behind the contractor and what he might have to pay as a result of this cross-licensing agreement. If the agreement was knocked out, the Government would have nothing to pay. If it stands and the contractor has to pay, the Government will stand him harmless, because no contractor would go ahead on the possibility of having this agreement hanging over him.

Mr. SHALLENBERGER. How is that being adjudicated, by a court of law or by the Air Craft Board?

Col. DEEDS. That has been in the hands of a committee of patent lawyers, who have made a report. It is being handled by the National Advisory Committee on Aeronautics, who instituted the proceedings. When it came before the Aircraft Board, they asked the same question that was asked here, Are the patents valid? For their own guidance, the members of the board asked these patent attorneys to make this investigation. The report of the committee of patent attorneys has been returned.

Mr. GREENE. The effect of that is also that the people who hold the various patents will not be fighting each other.

Col. DEEDS. That is the result. It closes out the entire patent matter.

Mr. GREENE. It settles all individual relations as well as relations to the Government?

Col. DEEDS. \$200 is a small item, in comparison with \$1,200 paid on the other side. If the patents are fundamental, it is not exorbitant, and it closes out what would be a very nasty situation.

Mr. HULL. The question that comes to my mind is what is the fundamental patent they claim on an aeroplane?

Gen. SQUIER. A copy of the full discussion of the whole thing can be furnished to the committee, and that will give you a complete explanation of the matter. The attorneys on the two sides were Judge Crisp and Mr. Fish, who is one of the highest authorities in the country on patent law. Those two men were the attorneys of the two contestants, and so, in order to see what patents there were, and whether they were valid, we invited a committee entirely outside to investigate. We have now gotten that opinion and the advice of that committee of patent attorneys, and we will give it to you if you desire it.

Mr. TILSON. Is it not a matter of law that we can not determine?

Col. DEEDS. When this question first came up in our finance division, we notified every contractor that we could allow them to have the limit of cost until the matter is adjudicated, and we have not made any payments yet. This is a matter entirely outside of our work. We have no department or division handling matters in connection with patents.

Mr. HULL. I am trying to get the information that some people want.

Gen. SQUIER. You can get that information from Dr. Walcott, of the Advisory Committee on Aeronautics.

Mr. HULL. In the matter of buying the equipment necessary for your department, as I understand it, you are willing to buy of anybody. Who is the gentleman that such people should apply to, if they think they have anything to sell in the line of equipment, or the parts of an aeroplane?

Gen. SQUIER. They can go to the equipment division, or appear before the Aircraft Board.

Mr. HULL. You started to make a point a little while ago, which I think you did not complete, and I think it will be of some interest to the committee to have you complete your statement in regard to it. That was in reference to the repairs on the railroads in France, I think. You started to say that something had happened in France that was also happening in Germany. What is it that is happening in Germany to the railroads and to the railroad equipment?

Gen. SQUIER. When war comes on the public utilities are neglected, and if they are neglected for as long a time as three years, they will all be falling to pieces. The railroads and the telegraph systems are in that state, after three years of neglect. We have a great job to do to help the French run their railroads, because women have been doing it, and old people.

Mr. HULL. I think I asked you this question yesterday, but I want to ask you again, to be sure it is made a matter of record. You were talking about machine guns, and you mentioned three types, but among those you mentioned you did not refer to the Browning gun. You said you wanted to say something on that.

Gen. SQUIER. We intend to use that also.

Mr. ANTHONY. You said you were going to use the Vickers gun. Is that the Vickers gun ordered by the Ordnance Department?

Gen. SQUIER. It is the same gun.

Mr. ANTHONY. That is the water-cooled type; is that too heavy?

Gen. SQUIER. I think it is the same gun.

Col. DEEDS. There are a certain number of Vickers guns which have been ordered by the Ordnance Department that are being turned out at Colts, and we are going to use the air-cooled Vickers up to a certain number.

Mr. ANTHONY. That is something new that has been brought out?

Col. DEEDS. It is the duplicate of the air-cooled Vickers on the other side.

Mr. ANTHONY. Is that a new development of the Vickers?

Col. DEEDS. No; it has been an aircraft gun for sometime.

Mr. ANTHONY. It is a light-weight machine gun.

Col. DEEDS. It is not going into quantity production here. It is a difficult gun to make, and we will use what we can get, under the present order, and follow that with the Marlin gun for the fixed gun, until we can get the Browning gun, which looks like a very good gun, but we will not use it until it has been demonstrated.

Gen. SQUIER. Our policy has been to get a gun and then get a better one when it comes along.

Mr. HULL. I would like to ask you about your cost plus contracts. You use cost plus 12½ per cent in your contracts?

Gen. SQUIER. Not all of them. Some of them are 12½ and some of them are 15.

Mr. HULL. There has been considerable criticism about the 10 per cent profit allowed in the place of cost plus contracts. Where did you get the idea of allowing 12½ and 15?

Gen. SQUIER. That is an evolution. I believe I could say that in cases where we have had to advance a certain amount of money to the contractor, we have taken advantage of that fact to lower the price, and have gotten a lower price than in the case where we did not have to advance the money. We have had to deal with all sorts of conditions.

Mr. HULL. Do you not think the 10 per cent plus contract is a pretty good thing for a manufacturing concern?

Gen. SQUIER. No, sir. I think that ordinary manufacturers in peace times make more than 10 per cent.

Col. DEEDS. Out of the 12½ per cent you must realize that the contractor must supply his buildings, and his fixed equipment. That is not furnished to him. He has to furnish it himself.

Mr. QUIN. Is not that percentage rate allowed on a part of the overhead charges?

Col. DEEDS. No. That does not go into the cost. He has to furnish the buildings and the tools. The jiggs and fixtures are included but the other material is not. The contractor must provide his own buildings, and his own machinery, and his own fixed investment.

Mr. FIELDS. Those things that are a part of the investment?

Col. DEEDS. Those things that are a part of the investment, and it seemed better for the Government to pay a little higher rate there and let the contractor be responsible for the buildings and machinery than for the Government to get into the building game. That was the viewpoint then, and it is not a regular cost plus 10 per cent contract, such as the contracts where the contractor gets 10 cents out of every additional dollar. There is a fixed profit per machine, in dollars, which is what the contractor gets, fixed at 12½ per cent.

Mr. HULL. Does that include the patent cost, or is that on top of the fixed cost?

Col. DEEDS. The patent has not been admitted as an element of cost.

Mr. HULL. Suppose you admit it, that is added to what you call your bogey profit, is it?

Col. DEEDS. Not to the profit; no. The bogey price there is supposed to include the patents. If the bogey price of an aeroplane is \$5,000, the \$200 is supposed to be included, if the \$200 is admitted as an element of cost.

Mr. HULL. It is not additional?

Col. DEEDS. It is not additional; no, sir.

Mr. SHALLENBERGER. I infer that you have a fixed profit that the manufacturer makes. Is it possible that something might occur, as it did in the case of the building of the cantonments, which were let on a basis of cost plus 10 per cent profit? We were told by the Quartermaster General that the actual average profit made was 2.84 per cent. In other words, the real profit to these men was not 10 per cent upon the entire expenditure. Is there a possibility in the case of the aeroplanes of something like that developing, that while, in fact, the amount allowed seems to be a large profit, under your management, it is possible that the actual average per centage of profit would be less than 12½?

Col. DEEDS. The bogey price is \$5,000, which would allow a fixed profit of \$625. If the plane should cost \$10,000 the profit still is \$625, except that if the price exceeds \$7,000, he has to stand 50 per cent of the extra cost taken out of his profit.

I think by the time the contractor gets his buildings paid for and this machinery—this is really becoming a rapidly changing thing—and meets the income tax he has to pay, I think most of them are satisfied if they come out even on the proposition. Their chief disturbance seems to be whether they are going to come out even.

Mr. SHALLENBERGER. I know that the first statement of the cost of the cantonments did not show the real cost of the cantonments to the Government, because there were additions and changes made.

Col. DEEDS. In the building of the cantonments, that was a straight contractor's job, but when you are going into industry and building buildings that are still on your hands as your property when the contract is completed, that is a different proposition.

Mr. ANTHONY. Are all of the available factories in this country now to be employed in the manufacture of the so-called Liberty motor, or will they go ahead developing motors of their own?

Col. DEEDS. The Liberty engine is being built now by the Packard Co., the Lincoln, the Ford, Nordyke & Mormon of Indianapolis, the Buick Co., of Flint, Mich., and the Dreco Motors Corporation, at New Haven. They have orders now for 22,000, but they will have an ultimate capacity when they come up to production of 200 more motors per day.

Mr. ANTHONY. Will these original aeroplane factories like the Wright-Martin and the Curtiss people be employed upon the aeroplane work, or what work will they do?

Col. DEEDS. The Wright-Martin people build the Hispano-Ring engine.

Mr. ANTHONY. Will they be allowed to develop that engine, or will they also produce your engine?

Col. DEEDS. We will let them work on a 300-horsepower Hispano, that if there is any development in that line they will follow that p. The Curtiss Co. are building planes and a new training engine.

Mr. ANTHONY. So that the two best engines that are being developed in the country to-day, or that are being built, are the Hispano engine and the American or Liberty engine?

Mr. ANTHONY. So there is every opportunity for further development by these individual corporations?

Col. DEEDS. One of the inevitable things always when you start to bring in standardization is that you are apt to kill individual initiative. That was one of the faults of the royal aircraft factory in England. We did not want to make that mistake, and anybody who has a really good proposition—there are more of the other kind coming in than in almost anything else—if anybody has a real good proposition, he can have it tried out.

Mr. ANTHONY. I want to get some information about the Zeppelin enterprise in this country. I think the Secretary of War and the Secretary of the Navy cooperated to an extent along that line, and that they each took a million dollars of the appropriation for air purposes and put those amounts together for the purpose of building a Zeppelin. Is that correct?

Col. DEEDS. I can not answer that question. We are not working on that.

Mr. ANTHONY. How much money was expended, and what is the status of that airship?

Gen. SQUIER. I will get that information for you. I am a member of the Zeppelin Board.

The board was appointed, I think, nearly a year ago. Admiral Taylor is on it, representing the Navy, and I am on it, representing the Army. We have not been particularly active, other than developing certain materials and alloys, investigating certain gases, and making plans and designs for certain sized ships. We have not built any ships. I do not know whether we will at all. Opinions seem to change in regard to that.

Mr. ANTHONY. As far as we are concerned, it is true, is it not, that we have abandoned the idea of making any of those battleships of the air?

Gen. SQUIER. No, sir.

Mr. ANTHONY. Under this appropriation?

Gen. SQUIER. No, sir; we have not.

Mr. ANTHONY. You are not building any now?

Gen. SQUIER. We are investigating it.

Mr. ANTHONY. Can you tell us how much money has been spent?

Gen. SQUIER. I can get that information for you.

Col. ARNOLD. I was present at the last session of that board. They there gave a résumé of what had taken place, and were preparing to have experiments to determine whether the envelope would hold the gas, and for what period. That is as far as the investigation of the matter has gone. They designed two ships, one for the use of hydrogen, and one for the use of argon.

The question came up as to whether they should go ahead and build, and it was decided that in view of the fact that nobody knows the exact limitations and value of the Zeppelin, an engineer with

capable assistants shall go abroad to make a study of Zeppelins in London and Paris, and upon his return he is to report, and upon that report would depend the decision as to whether or not that ship should be constructed.

Mr. ANTHONY. I want to make a statement right here to the effect that of all the cantonment construction I have seen, that which has been built by the Signal Corps has apparently been done in the most efficiently and economically of any. Has that been done largely on the plan of letting the contract to the lowest bidder, or has it been done by the other method?

Gen. SQUIER. It has been done by the cost plus method principally.

Mr. ANTHONY. Those that I have seen were being done by the method of letting the contract to the lowest bidder, in your department.

Col. DEEDS. It has been done both ways.

Gen. SQUIER. On the question of building those fields, Col. Edgar has had complete charge of the construction, and he has used all the agencies and erected them without much letter writing at all. He has done it direct.

I, myself, consider that Col. Edgar has made a great success of it. I think one of the best successes in a job of that kind that I know of. He is a very able man, a man who has done things, and I promoted him for specific success, as I have done recently also for the designer of the Liberty motor, and made him a lieutenant-colonel. I have also done the same for the men who developed the radio.

Mr. McKENZIE. What is your private opinion about those extremely heavy flying machines, designated by Mr. Anthony as battleships? Do you have any great expectations of their being of any practical use?

Col. DEEDS. I think the tendency is in that direction. Admiral Taylor feels that way, that the tendency is toward the larger ships, with larger sized guns, so that we can get a longer range, and get the other fellow before he reaches us.

Gen. SQUIER. Admiral Taylor predicts a similar kind of development for the aeroplane as took place in the Navy, in the matter of ships.

Col. DEEDS. Production at present is well in hand. We are, I imagine, from the time we started last July, up to where we thought we would be, although we are between 45 and 60 days behind the schedule. We have had all the difficulties incident to the creation of a new industry. We had to completely change the program in September, about which we do not complain at all. We have taken our medicine and gone ahead, and to-day our first shipment of Liberty engines has gone abroad.

There are a lot of things that may interfere with our plans, such as transportation, labor difficulties, and a lot of other things incident to war, but the situation is under control.

The engine itself is meeting all requirements. Here is a telegram which has just been received: "Engine No. 12 has now completed 61 hours, wide open throttle," a thing which has never been done in the history of machinery, "engine has run total of 90 hours without trouble."

Mr. McKENZIE. You say you may be hindered in some way in completing this program, but you have no fear but what you will be able to take care of any army we may be able to have in France by the 1st of July and later?

Col. DEEDS. We do not expect any difficulty on that. Between what they are doing over there and what we are doing here, we will be able to meet the situation.

Mr. McKENZIE. On that point in reference to the orders you have given, you have had ample planes for training purposes?

Col. DEEDS. Yes; we have shipped altogether 1,700 training planes, and we have a surplus now.

Mr. McKENZIE. That is to the schools in this country?

Col. DEEDS. Every school is equipped, and we are storing planes. We have met that situation, and in meeting it we have learned something, and we have been filled with a lot of courage and confidence. We have made mistakes and are going to make some more mistakes, but we are not trying to hide them.

Mr. McKENZIE. I have read some criticism along that line.

Col. DEEDS. There has been a lot of it, but we felt that our job was not to talk, unless we talked to you, and we have not struck back at any of it, because we have a lot of contractors who tried to get business, and some of them did not get it, perhaps, who should have had the business, and it is possible that they were not fairly treated. But that is apt to be so in a great rush job of this kind.

You can not take up a thing as big as this proposition and push it through without being subject to criticism.

You gentlemen probably appreciate what that means. Any time you hear of any criticism, you will know that we are not perfect, and do not pretend to be, and we will say we are probably about 60 days behind where we thought we might be last July, but we ought to be congratulated that we are not six months behind.

There is built up behind this proposition such an organization as there never was behind anything, and I say that out of long years of industrial experience. There never was such a strong combination of contractors behind anything as is behind our engine production and our program.

We have a total of 16 contractors on engines, 14 on planes, 25 on instruments, 25 on spare parts, 19 on propellers, 16 on the Handley-Paige parts alone, and there are over 400 subcontractors, all behind this program.

The Liberty engine is in as safe hands as we know how to put it. In reaching this point, we have had to ride sometimes rather rough shod, but we felt that we should make selections above everything else for the purpose of getting the goods, rather than to hand out contracts as a sop to the men who wanted them.

The answer is that the engine is an engine, and we are getting it, and we are going to get planes, and we will meet Col. Arnold's program with the equipment end. Along with that have had to come the machine guns and the sights.

We have met the most difficult proposition that has been put up to any group of people I know of, because we have a most highly technical industry. We have had, for instance, to get out and get acetate of lime, and we have had to get our castor oil and our linen. We ourselves bought over \$12,000,000 worth of long staple cotton,

so that we could have the right kind, and we have to-day a cotton cloth which I think is superior to the linen. It has passed better tests than the linen, so far as the strength of it is concerned.

We have made our mistakes, and we are going to make some more.

Mr. McKENZIE. From your statement you now have your organization complete, as I understand it, and are in the process of turning out the finished product?

Col. DEEDS. Yes, sir.

Mr. McKENZIE. And your greatest trouble is now over, and all you need to do now is to put in your orders and the stuff will be coming along?

Col. DEEDS. We have done the organization work, and the foundation is in good shape. As a whole, I do not want to be over optimistic. We have had our troubles, and I should say frankly we are behind now, but we are not going to stay behind, because we have enough machinery to keep up with it now.

Mr. McKENZIE. Suppose you had no difficulty about anything else and that we were all fixed, but we did not know where we were going to get a satisfactory engine.

Now, as I understand from your statement, you have your organization all complete, and you know where you are going to get all of your articles, and contracts have been made, and shipments will be coming on from time to time, and you can complete this program.

Col. DEEDS. Yes, sir. We are in this position: When you start, you can not have too much help. We had to make these planes; there were no drawings in existence. We got a sample made up of a 200-horsepower engine, and we had a plane, and that had to be fixed in an engineering department. If we can get samples of these things, we can take one of these planes within the next 30 days, have complete drawings made of it, and duplicate it. We can pyramid them just as fast as we feel sure we can meet the equipment situation, unless something happens; and if it does, we believe we have enough punch behind it to do the thing.

Dr. Ames has written a long letter here and has made quite a considerable statement in reference to the Liberty engine. The doctor does not mean to mislead, but the good scientific man did not get at the facts when he was on the trip he made.

Mr. ANTHONY. Who is Dr. Ames.

Col. DEEDS. He is a member of the faculty of Johns Hopkins University.

Mr. ANTHONY. Was he appointed as an inspector?

Gen. SQUIER. He wrote an article or a letter to the editor of the Atlantic Monthly, and by interviewing a man here and there he pieced together a story instead of getting the facts. He said there would not be any mechanics trained to run the engine. He simply did not have the facts.

Col. DEEDS. In his statement he said there would not be any mechanics for a year. He said if you want to get the type of man you have to have to take care of the Liberty engine, you have to get a highly technical man, and he said we could not get the men to take care of this engine within a year. We have over 4,000 of them in training on this side, as Col. Arnold just told you, and we have 6,000 training on the other side. Dr. Ames said they would not be in

production at all in July, but in reply to that, we expect to hit the maximum production in July. But not understanding production problems, he did not get it straight at all. I do not think he means anything, but that criticism is being quoted considerably; it has gone broadcast, and you are going to meet it.

Mr. HULL. There was an inventor here who had a marvelous flying machine that he wanted to manufacture for the Government. I think his name was Eisenhoff. He offered to build this plane and everything about it complete, and if it did not perform as he said it would, it would cost the Government nothing, but if it did what he said it would do, the Government was to pay the cost of the production.

Mr. KAHN. The amount was \$250,000.

Col. DEEDS. I have never heard of it since that time. Nothing has happened in regard to it since. There was a request for two or three Liberty engines, which we could not fill.

Mr. HULL. This man stayed in town for some time, but he could not get a hearing with your department, as I understand it.

Gen. SQUIER. He got a hearing. We have an inventions board, which hears any and all people who have anything to propose. Dr. Durand is the chairman of that board, and its office is in Room 518 in the Munsey Building. The advice of Dr. Durand to the Signal Corps is considered most carefully.

Mr. HULL. I have never seen any reason why the Government could not make that kind of contract.

Col. DEEDS. The difficulty is when you make a contract of that kind they go out and commence to talk about it to everyone. We are working on seven different things which the Government is paying for right now.

Mr. HULL. This man did not ask for the payment of anything. It seems to me we ought to have people who could protect the public from stock-floating operations, and this man was willing that should be done.

Mr. FIELDS. He said he had good financial backing, and he said his people were willing to put up the money for the building of the machine, and if the machine does not do all that he claims for it, the Government would not have to pay a cent. If it does what he claims for it, they said they wanted the Government to pay the cost of building it.

Col. DEEDS. We have a number of people working on things of that sort. Dr. Borghum is one of them. He is the well-known sculptor.

Mr. HULL. There never was an invention perfected but what every scientific man has stood out against it. When a man comes along with a practical proposition, which is a business proposition, I do not think he ought to be sent to the scientific men, but that he ought to be sent to the practical business men. As far as the stock-floating feature of it is concerned, it seems to me that the Department of Justice ought to be able to draw a contract which would prevent that sort of thing.

Col. DEEDS. Why does he not make it and pay for it?

Mr. FIELDS. This man has a good reputation as general inventor.

Col. DEEDS. The Aircraft Board will receive anything anybody has to offer.

Mr. SHALLENBERGER. Is that Gen. Pershing's program?

Col. DEEDS. Yes, sir; that is Gen. Pershing's program.

Gen. SQUIER. There is nothing about any of this proposition that is not Gen. Pershing's.

Mr. SHALLENBERGER. I have been around the country, and have talked to a good many people about this proposition, and I thought the amount you asked for at the beginning was a tremendous amount. But upon your assurance that you were going to deliver the goods, everybody threw up their hats. Of course, if the committee can go on assuring the country that you are coming through with your program, that will be a tremendous achievement.

Col. DEEDS. We will come through with the program. We have slipped behind a little bit, but we are going to be there next spring. The worst thing we have been up against is the advertising of our aircraft program. There has been a great deal of talk about having 100,000 airplanes at the front, but that number of planes would require a tremendous army of men, and that is a perfectly impracticable proposition.

The CHAIRMAN. I am going to ask you to put into the hearings an itemized statement showing the different items for the Washington-Alaska military cable and telegraph system, giving the amount of money appropriated last year, and a detailed statement of how that money was spent, and also a statement as to how the money you ask for this year is to be expended.

Gen. SQUIER. I have an explanation of that.

1. Salaries and wages..... \$43, 945

This is the amount now expended under this head, as shown in detail on the analysis, and provides for the increased expenditure of approximately \$27,000, now being charged for this purpose against the appropriation for the support of the Army.

2. For all radio telegraph installation..... \$50, 000

The Signal Corps now has in operation in Alaska nine high-power radio stations. In addition to the amount required in the upkeep of these stations, it is contemplated to establish a high-power station at Valdez and replace the present low-power station at Fairbanks with a high-power station with a view to intercommunication with Fairbanks and the coast, and thereby making possible the continuity of communication between Valdez and Fairbanks, when the land lines between these points are interrupted. This is the only stretch of line between Seattle and Nulato not having a duplicate means of communication, and its need has been demonstrated on more than one occasion.

There is also considerable pressure from the Alaska Territorial authorities and legislative body, commercial bodies, and mining interests for an extension of the existing system through the erection of several small power stations in outlying and isolated districts, viz, Candle district, near Nome, and the southwestern peninsular, now being developed, but handicapped by the lack of communication to the outside world. The two proposed stations, at Valdez and Fairbanks, will cost approximately \$30,000 and the balance will provide for three additional low-power stations.

3. Rebuilding and betterments, first section..... \$20, 000

This is to cover ordinary expenditures in the maintenance of this section and to provide for necessary rebuilding of the lines, where they have become weakened and difficult to maintain, in a proper working condition, due to glaciers, winter storms, and other climatic disturbances peculiar to Alaska.

4. Rebuilding and betterments, second section..... \$5, 000

See remarks under No. 3.

5. Extension and betterment and maintenance of the Alaska cable system
and the operation and maintenance of the transport *Burnside*..... \$20, 000

For cables and machinery, additional cable to replace deteriorated equipment, and the replacement of obsolete cable instruments with a more modern equipment.

For the rental of offices and incidental expenses in connection therewith. \$8,500

This is practically the amount of the current expenditures for the purpose, and was formerly charged against the appropriation for the support of the Army.

Total..... \$147,445

The CHAIRMAN. I will ask you also to put in a table showing the number of enlisted men that you have in your corps. There seems to be some difference between the estimates given by the Quartermaster General and the number you are asking for now. The Quartermaster General estimated for 153,925, while you are asking for 79,000. I wanted you to put in a complete table in reference to that, and also a table as to the strength of your officers in the Signal Corps, together with their rank and pay.

Gen. SQUIER. The number in each rank at the present time and their pay?

The CHAIRMAN. Yes, sir.

There is also an item in here, on page 15, for "Aviation increase, \$4,916,800," and I wish you would give a brief explanation of that in connection with the tables. I understand that is included under the provisions of the act of June 3, 1916, giving additional pay to the men who fly.

Mr. SHALLENBERGER. I saw recently a statement that there was some dissatisfaction in connection with that point, that you have abandoned giving the officers increased pay.

Gen. SQUIER. That will be before this committee. Gen. Pershing has recommended a change in the law. It will come in due course from the War College.

Mr. ANTHONY. In connection with the items for the Washington-Alaska military cable and telegraph system, there is an increase of nearly \$100,000. Is that increase necessary?

Gen. SQUIER. I think so.

Mr. ANTHONY. What would make it necessary?

Gen. SQUIER. In explanation of that I would like to read this statement:

Washington-Alaska military cable and telegraph system..... \$147,445

The amount of the appropriation for the current fiscal year is \$50,000, and an increase is asked for the ensuing fiscal year of \$97,445, in order to cover the cost of installation of radio service and of rebuilding and betterments of telegraph lines.

Prior to 1912 the average annual appropriation for the maintenance of this cable and telegraph system was considerably in excess of \$100,000, but since that date the annual appropriation has only been \$50,000. The average value of the business handled annually for the past 12 years has amounted to about \$350,000, of which amount the commercial business amounted to about \$190,000 annually, the tolls for which were collected and turned in to the Treasury. The remainder was the value of official business handled on which no tolls were collected.

The following are the proposed items of expenditure which make up the estimate of appropriations for 1918-19:

Salaries and wages.....	\$43,945
Radio installation.....	50,000
Betterments, telegraph system.....	25,000
Maintenance and betterments, cable system.....	20,000
Incidentals.....	8,500
Total.....	147,445

The item for radio installation is intended to cover the cost of establishing a high-powered station at Valdez and replacing the present low-powered station at Fairbanks by a high-powered station, thereby providing for continuity of service between Fairbanks and the coast, when the land lines are interrupted. These two stations will cost \$30,000. and the remaining \$20,000 is intended to provide smaller stations for several outlying mining districts which are now without means of communication.

That is the country of all others where the radio is a necessary thing. It is the salvation of the people up there. It is a serious thing not to keep up your line of communication in that country.

Mr. MORIN. In the last appropriation bill we authorized you to establish vocational schools. Has that been done?

Col. ARNOLD. At the present time we have in operation eight ground schools for training flying officers, three ground schools for training nonflying officers, one for training engineer officers, one for adjutants, and one for supply officers. We have five schools in operation training mechanics for the different aero squadrons.

Mr. MORIN. Those are privates?

Col. ARNOLD. They are enlisted men.

Gen. SQUIER. We are utilizing the northern flying schools for mechanic schools at this season of the year.

Col. ARNOLD. The five northern schools will accommodate about 4,500 men now under training. We have in operation in the South eight flying schools. They are actually training about 2,000 flying cadets. We have five new flying schools which will open about February 15.

Mr. FIELDS. How do you get men for those cadet flying schools?

Col. ARNOLD. For the schools for the cadet flying officers we have a publicity service operating throughout the country in order to get those men. There is not a newspaper in the United States that at some time or another has not had in it an article telling any man who wants to get into one of those schools how to go about it. We have examining boards in every large city in the United States and at every camp. We use civilian sources and military sources.

Mr. FIELDS. Is not the Aviation Corps about the only branch of the service now open to men of the draft age who may be eligible for a commission?

Col. ARNOLD. Without question.

Mr. MORIN. That is not the case with the nonflying men?

Mr. FIELDS. Is that true in the flying branch only?

Col. ARNOLD. In the nonflying branch a man has to take the regular course and demonstrate his usefulness, going in as an enlisted man. In the flying branch of the service we accept them as they are, because the Secretary of War made that ruling on account of the hazard and risk.

Mr. FIELDS. A man can enlist for this training?

Col. ARNOLD. In the nonflying branch?

Mr. FIELDS. Yes.

Mr. MORIN. He enlists as a private, does he not?

Col. ARNOLD. Yes.

Mr. FIELDS. Does he have to go through the process of induction?

Col. ARNOLD. Yes, he has to go through the induction process.

The CHAIRMAN. He is drafted and then inducted?

Col. ARNOLD. If his number has not been called he can enlist.

Mr. McKENZIE. You are taking in a number of men by transfer from other branches of the Army?

Col. ARNOLD. We are utilizing every source from which we can get the men we need.

(Thereupon, the committee adjourned to meet to-morrow, Thursday, January 24, 1918, at 10.30 o'clock a. m.)

HOUSE OF REPRESENTATIVES,
COMMITTEE ON MILITARY AFFAIRS,
Thursday, January 24, 1918.

The committee met at 10.30 o'clock a. m., Hon. S. Hubert Dent (chairman), presiding.

STATEMENTS OF COL. E. A. DEEDS, COL. H. H. ARNOLD, COL. CLINTON G. EDGAR, MAJ. R. M. JONES, AND MAJ. R. H. COLES, SIGNAL CORPS.

The CHAIRMAN. Col. Deeds, I believe you desire to make a further statement to the committee.

Col. DEEDS. I would like to say just a word or two, Mr. Chairman, before Col. Edgar proceeds.

We did not get into the organization of our divisions in our discussion before, and Gen. Squier thought it might be well to come over this morning and take a moment or two to tell you what the organization is.

The Equipment Division—I suppose everyone realizes that is a large division with big responsibilities, expending a lot of money, and that our real success in our program will depend upon getting the output. So we have lined up as many of the best contractors as could be gotten together. But the great difficulty is in getting a decision. When a difficulty comes up in the factory of the manufacturer. If we can keep the contractor enthusiastic and settle his troubles as they come up we are going to do more to increase production than almost anything that can be done.

I think that we also realize that the real pressure has not come yet upon our divisions. We are not really at war yet, in action over there, and I think we have looked ahead in our organization to the time when the greatest pressure will come.

What the Equipment Division has done is to organize the country into districts and to locate central offices in them. We have one in New York, one in Chicago, one in Buffalo, one in Dayton, and one in Detroit at present. In those offices is to be found a production man, an engineer, an inspector, and a finance man, because the little finance troubles begin cropping out, and those matters can be cared for only in that way. These men in each of these localities are given full authority to settle anything that comes up, being men of broad experience and knowing that if there is some question too large for them to settle they can send it back to Washington.

That arrangement means that any question in a manufacturing plant can be settled that day, whether it is a matter of inspection, production, finance, or engineering. It would be an impossible task if every question had to be referred to Washington to get tangled up

in red tape, every department here being busy and not having time enough to do it.

We have gone further than that. We have taken our chief production man, Maj. Shepler, who was the production man for the Willys-Overland Co. with 25,000 men under him, and Maj. Nextor, who was the chief inspector with the Deere people, and Maj. Smith, the finance man, and Maj. Grow, president of the ———, who had been abroad. That group of men formed a little production board. We have them in Cleveland, with offices there, so that they are within five and a half hours of our principal contractors. That has been done because to get in and out of Washington these days means that you lose three days a week.

On the board we have Lieut. Emmons, who is the Washington representative of the production board, so that we are kept in constant touch with the board through its resident member, and are able to keep in close touch with all its developments. If trouble comes up at any particular factory, it is taken up by that little group of men, who are right there on the ground. They will settle it on the spot, so that production will not be held up. If it is something that can not be settled, they apply to Cleveland, and within five hours and a half the men can be there, and that question can be settled the next morning.

So that we are not permitting a single thing to rest beyond a single day, and I think in that way we are going to speed production more than anything else we can do. Having been through production, I know that indecision means nonproduction.

In our finance we have so organized that division also that for the last four weeks the average length of time that an invoice stays in the department, from the time it arrives at the department until the check goes out, has been less than 24 hours, so that we can give prompt business administration in our affairs.

The same placing of authority out where the job is is also being arranged now in the air division, so that every little question will not have to be referred here to Washington, with the consequent delay. Eventually we will have the same general type of organization for the whole air division, the schools where the training is going on, and all the other branches of the division. We will have the organization scattered out over the country so that those things will be settled very promptly.

Mr. GORDON. You just observed a few minutes ago that this stuff was paid for within 24 hours of delivery. What system of inspection have you?

Col. DEEDS. No; I said that from the time invoices arrive at the department until the check goes out, it averages less than 24 hours; but the invoice is not made until the inspection is all approved and everything else is up to date.

Mr. GARRETT. Give an illustration of what you mean by indecision in the operation of one of your plants.

Col. DEEDS. Suppose a question comes up in reference to the use of this particular piece of tubing that goes in the axle of an aeroplane. It may be that we can not get the exact thickness of that tubing but we can get tubing which is two or three thousandths thicker. Suppose that should come up in the ordinary way. The inspector would report it to Washington, and it would have that delay. It

would then go to some other department here, but they would have it only on paper and they would take their time to decide it, and so it goes around the circle, and I can see that question lying here for three weeks without any difficulty at all. That is not unusual and is very natural under the circumstances and does not reflect on any department.

Suppose that question came up, and that there gathered around that piece of tubing the inspector, the production man, the engineering man, and the finance man. They would sit down with the chief engineer of the factory and say, "Sure, we can use a tubing two-thousandths thicker. It would only add about 8 pounds to the weight of the aeroplane, and we can get the aeroplane out." So they could make their decision on a proposition like that without any lost time. It will finally come on here and become a matter of record in Washington.

We would get the machine in the meantime, and more than that, you would have the enthusiasm of your contractor. When the contractor suspends operations on his work, and loses two or three weeks settling a question, he goes up in an explosion about Washington red tape. That is the way those things work out.

Mr. GARRETT. You mean when your factory gets the plans and specifications, if the plans and specifications can not be met in every detail, you have a board created for the purpose of revising them, so that they may be met?

Col. DEEDS. We have a board created for the purpose of revising the plans and specifications, so that they may be met, and still not drop in quality.

You have a great deal more difficulty putting something past a board which is right on the ground than you would in getting it past some paper work, somewhere. It is an improvement and is working out in the way I have indicated. All the lost motion is taken out of the operation, because the members of that board are on the job. We have an enthusiastic group of contractors, and I think you will find them so if you discuss these subjects with them. It is just plain horse sense, but it is a little bit contrary to past policy. But this thing is so big, if you ever try to focus it all here, you are going to be swamped. We have got to trust somebody to be responsible for that job and settle the thing, so that we can proceed.

The same general principle is to be applied to the Air Division by locating competent officers in certain localities, who will decide things quickly, without having all the paper work that it has been customary to have, going back and forth to Washington, because that is going to become more difficult as time goes on.

Further than that, trips have been made very regularly. I know as head of the Equipment Division I average about three nights a week on the sleeping car. Gen. Squier has made two or three trips personally to our contractors, and has inspected every field under his direction.

The Aircraft Board has gone through the contractors' plants, so that the local authorities here have been out and gotten fairly familiar with the troubles of the other fellow. We are getting production, and that is the final and most important thing. It is the best we can do.

Gen. Squier wanted me to say another thing. So far as publicity is concerned in the Signal Corps, there is a positive order that no officer of the Signal Corps shall say one thing for publication, and that is being strictly adhered to. It would be a very serious matter if any officer of the Signal Corps should permit himself to be quoted. He would be brought up and an explanation demanded.

Mr. ANTHONY. Along that line of publicity, if there is a ban on publicity, how did it happen that in one of the magazines last week there was a most elaborate article, practically detailing all of the developments of the Signal Corps work which we have heard about in these hearings?

Col. DEEDS. Which magazine was that?

Mr. ANTHONY. That was The Saturday Evening Post.

Col. DEEDS. That was an article written by Sam Blythe.

Mr. ANTHONY. But that article contained practically all the developments that have been unfolded here to this committee.

Col. DEEDS. There were a lot of those things there.

Mr. ANTHONY. Who did that come from?

Col. DEEDS. That came from Sam Blythe. He went out and made a trip.

Mr. ANTHONY. Where does the information come from? Where does he get his information?

Col. DEEDS. He made a trip around the country.

Mr. ANTHONY. He can not dig up that information at these cantonments?

Col. DEEDS. He went to the factories.

Mr. ANTHONY. Did he not get the information at the War Department here?

Col. DEEDS. No; I do not think he got all of it there. I talked with him; I talked with him myself.

Mr. GORDON. Then did you violate those regulations?

Col. DEEDS. No, sir.

Mr. GORDON. Then what does the regulation mean that prohibits officers from discussing these matters?

Col. DEEDS. I mean to say that the regulation prohibits officers from signing their names to any articles that are published, or permitting themselves to be quoted.

Mr. GORDON. If they stuff a newspaper man full of that information, is that not violating the regulations?

Col. DEEDS. It depends upon whether it is done with the understanding and consent of the Aircraft Board.

Mr. GORDON. Were you so authorized?

Col. DEEDS. I was authorized to talk with Sam Blythe on this matter.

Mr. SHALLENBERGER. It was practically authorized by the Aircraft Board?

Col. DEEDS. It was.

Mr. ANTHONY. What I marvel at is that Mr. Blythe should get information that the chairman of this committee does not get.

Col. DEEDS. I do not think there is anything in the article that is harmful.

Mr. QUIN. When we passed the bill appropriating \$640,000,000 for the aviation work, we were requested by the Secretary of War and other authorities in the War Department not to give detailed

information in regard to it, and on the floor of the House, when asked for information by members, we said that we were not giving detailed information, and then they showed from what appeared in the newspapers that somebody had given out everything, all of the details, when we went on the floor of the House.

Col. DEEDS. There is only one article that was authorized by the Aircraft Board and that is the article written by Sam Blythe.

The CHAIRMAN. Have you read that article?

Col. DEEDS. I have not read it clear through.

The CHAIRMAN. Several people have called my attention to it. I have not read it through. It seems to speak by the card, as to the development of the Liberty motor.

Mr. NICHOLLS. I want to ask you a question along this line. I am not referring now to the article in the Saturday Evening Post written by Sam Blythe, but I would like to ask you about an article in the Outlook of last week.

Col. DEEDS. Dr. Ames wrote that.

Mr. NICHOLLS. I want to ask you about the statement he makes there. He says we can manufacture the Liberty motor very fast, but that after we manufacture it it is so technical that in case we have trouble with it it is going to be hard to get mechanics to fix it. What about that statement?

Col. DEEDS. It is less technical than any aeroplane engine.

Mr. NICHOLLS. Did you read that article?

Col. DEEDS. Yes.

Mr. NICHOLLS. You remember that statement?

Col. DEEDS. I remember the statement of Dr. Ames. I have a letter from Dr. Ames. He quotes Maj. Vincent on that subject. It may be that the major told him that to get a man who would be really valuable to run a 50-hour test on an aeroplane motor would require a year of preparation, that it would take a year to prepare a man to do that work.

Mr. NICHOLLS. In other words, if we can not get the people to repair these motors, that would be a great defect?

Col. DEEDS. It would, but this is a simpler engine than any aeroplane engine at the front. As Col. Arnold has told you, there are 4,000 mechanics in training in this country, and 6,000 on the other side who are being prepared to take care of that engine.

Mr. NICHOLLS. Where did Dr. Ames get his information?

Col. DEEDS. I do not know. The doctor imagined that.

Mr. FIELDS. In other words, a man does not necessarily have to be as efficient as Dr. Ames to repair that engine?

Col. DEEDS. No. Dr. Ames being an ultra scientific man, probably could not repair that engine himself. It is a great thing to be able to let this engine alone after you get it running. This is a perfectly safe engine.

Mr. GARRETT. As I understand from Gen. Squier's testimony, the one great feature about the Liberty motor is that it is standardized, and instead of requiring somebody with detailed and scientific knowledge about mechanics to fix it, it only requires somebody to take the defective part off and put on another part like it.

Mr. NICHOLLS. I understand that, but I was wondering why Dr. Ames should make that statement. It discourages the public.

Col. DEEDS. I think it was an unfortunate article, and I do not know why the doctor wrote it, although I had a letter from him saying that what we needed was Northcliff. He is a very fine gentleman.

He suggested why he should not do this, but on the other hand I can see how an ultra technical and scientific man could get off alone, not knowing production in regard to this or other things, and could bring about that very form of reasoning and be sincere in just what he said. But that is not the situation at all as the doctor has depicted it.

Mr. GORDON. After all, it was a mere expression of opinion?

Col. Deeds. That is all.

Mr. QUIN. Do you not think it would have a bad psychological effect upon the public?

Col. DEEDS. Yes. There is one thing always to be considered, and that is that it does not make much difference what anybody says, the Liberty motor goes right ahead and does the trick just the same, because it does not understand those things.

Mr. TILSON. Do you not think that the trouble in regard to this publicity proposition would not be with the articles that an officer would give out in his own name, but after all the worst trouble comes when somebody goes up to the Army and Navy Club and gets talking to the officers, and the officers in their natural enthusiasm naturally bubble over a little bit and give these fellows who talk with them a pretty clear outline of the proposition, about the same, perhaps, they give to us later when they come before this committee formally? Is not that largely the trouble?

Col. DEEDS. I think so. But you can get any kind of information if you pick out the right fellow.

Mr. GREEN. If you wanted to get at the remedy for this matter, having standardized the Liberty motor, you would have to standardize all human nature.

Col. DEEDS. Yes, we have had some experience in attempting that.

Mr. HULL. I want to ask you one question in regard to the matter of publicity. Suppose a member of this committee, having these details, should give them out, how would you look upon that member of the committee?

Col. DEEDS. I do not know. I believe that the members of this committee feel their responsibility as much as the rest of us, and I believe their good judgment would be as good as anybody else's.

Mr. HULL. That is the very point I want to make. I am afraid to talk to anybody for fear that some publicity might come out of what I might say, and the fellow who used that would say he got it from a member of the committee. If we are going to have secrecy about this proposition, it seems to me that everybody ought to be secret. That is my own opinion about the matter.

Col. DEEDS. There has been too much talk about this producing 100,000 aeroplanes, and too much talk about the aeroplanes being the only way to end the war. There has been a little bit too much of that.

Those of us who are in this thing know that the aeroplane is an important part of our war program, and we also realize that the Artillery and the Infantry and other things are just as vital as our part of it. We are trying to follow the program as outlined by the

people on the other side, who know, and that does not call for 100,000 aeroplanes.

The CHAIRMAN. Yesterday I asked Gen. Squier to put in the record a statement in regard to the personnel.

Col. ARNOLD. I have that.

Col. DEEDS. I have been brought here to handle the business administration, and questions of that kind, right along side of Gen. Sultzman, who handles the other things. The general has had an insight into the industrial side of war which I think is one reason why we are able to make as good a show as we have.

Col. ARNOLD. The type of men he has asked for in that increased number are not in the service on the first line. They are for the service in the rear.

Mr. ANTHONY. Can you give us tables to show how many are in the field organizations, and how many in the mechanical organizations?

Col. ARNOLD. I have divided the men in this way, giving those who at home and in the Insular service, then those who are at general headquarters and the service of the front, and then those in the service of the rear, from the first line back.

Mr. ANTHONY. What I meant was whether you can show the proportion of men that are in the military organization for field work and the others who are purely mechanics.

Col. ARNOLD. The service of the rear practically covers all those used for mechanical construction purposes.

Mr. ANTHONY. Those are in the field battalions?

Col. ARNOLD. Yes.

Mr. CALDWELL. Has Gen. Pershing asked for any considerable increase in the field battalions?

Col. ARNOLD. Maj. Cole will answer that question for you.

Mr. GREENE. The field mechanics take a machine as it comes down?

Col. ARNOLD. Our squadron organization is fixed so that when an aeroplane comes back, if it can be repaired inside of 24 hours, it is repaired in the squadron; if not it is sent back to our repair park.

Mr. GREENE. That immediate overhauling must necessitate some mechanics being at the front.

Col. ARNOLD. Yes, sir; it does.

The CHAIRMAN. When was this request for an increase received from Gen. Pershing?

Col. ARNOLD. We are receiving them practically all the time, by cable.

The CHAIRMAN. How are we going to know how many men to legislate for?

Col. ARNOLD. The last bill, as I remember it, authorized the President to organize such regiments, divisions, and squadrons, as he might find to be necessary.

The CHAIRMAN. We gave him unlimited power, but when we come to appropriate we have got to have some idea of the number of men we are going to appropriate for.

Col. ARNOLD. I believe these figures I am giving you now are the final figures, because Gen. Pershing is sending over an officer now with his complete organization for the aero program on the other side. We have put these cable advices together and gotten the total, and

we have every reason to believe the totals will agree with the organization he is sending over. If it does not, we will have to ask for more.

Mr. GORDON. Officers and men?

Col. ARNOLD. That is the total number of officers and men.

Mr. GORDON. How many officers and how many men?

Col. ARNOLD. About 15,000 men and 660 officers. Those figures are approximate. We can not get them accurately because more officers are going over all the time.

Col. DEEDS. The 15,000 men who have been asked for to assemble planes is liable to lead you into confusion. There are 25,000 mechanics going across. They are to be used for assembling planes over there and in the different factories. A part of them will be used to take care of the planes, and part of them will continually go to the front as mechanics. As far as the night bombing planes are concerned, the parts will be made here and assembled on the other side, we to furnish the buildings. The arrangement for that has been worked out. It may be, as the shipping situation gets worse we will have to go over there and get into the assembling on the other side. But for the present we are taking the planes as you see here and are going to assemble them and ship them complete. The large planes we are going to assemble over there, and these men will help do it.

Then, if things get in bad shape, we have got 24 concerns making the spare parts and we can send the parts over, and go into the business of assembling on the other side.

But the making of the parts is about one-eighth of the job of building an aeroplane, and to build a big program, we will have to decide whether it will be better to ship abroad the men, the food, and the raw material, or to ship the finished machines from here.

Mr. FIELDS. It has seemed to me that it would expedite deliveries on the other side to ship the machine knocked down.

Col. DEEDS. They will be shipped knocked down, but when you go to separate them into the various little pieces, then you get into the regular plane building job, which would take thousands of people.

Mr. FIELDS. You can do that to a better advantage on this side?

Col. DEEDS. Yes. But I want the committee to realize that we are ready to do that both ways, because we will have our assembling plants to assemble the large machines, and if it becomes necessary to extend the assembly plants further, we can do that within 30 days' notice. We are watching very carefully both sides of that proposition.

Mr. FIELDS. You generally ship the planes from this side entirely ready for use?

Col. DEEDS. Oh, no. We box the wings in one box, the tail control in another, the engine in another, and so on.

Mr. FIELDS. I think the impression was created that in some instances some of them were put up on this side, ready to fly.

Col. DEEDS. No; they are not, but they are put up in such a way that they can be taken to a park and put together in a short while and made ready to fly.

Mr. GARRETT. Just as you ship a binder—ready to put up for use?

Col. DEEDS. Yes.

Mr. QUINN. What is the time limit within which Gen. Pershing wants these men he has asked for?

Col. ARNOLD. We are going to do the best we can to get them for him by the 1st of July. That is when he would like to have them. We are taking advantage of every boat we can to get our men across.

Mr. GREENE. How large is the balloon squadron?

Col. ARNOLD. A balloon squadron in the past consisted of four companies of 100 men each.

Mr. GREENE. It is a larger unit than the plane squadron?

Col. ARNOLD. Yes. Gen. Pershing has reorganized that so that the balloon organization in the future will consist of companies of 200 men each, instead of squadrons.

Mr. ANTHONY. Will each company have charge of a balloon outfit?

Col. ARNOLD. Each company will have charge of two kite balloons one of which will be actually up in the air.

Mr. CALDWELL. Is that the so-called sausage balloon?

Col. ARNOLD. Yes, sir.

Mr. CALDWELL. What is the size of the dirigible organization?

Col. ARNOLD. We have not any dirigible organizations.

Mr. CALDWELL. Have we not any of those under construction?

Col. ARNOLD. We have some under consideration, but they have never been quite successful.

The CHAIRMAN. Maj. Cole, we will be glad to have a statement from you in reference to the personnel.

Maj. COLE. This follows up Col. Arnold's statement, Mr. Chairman.

The Signal Corps proper is the subdivision of the Signal Corps, which deals with the field telegraph battalions, the battalions which have for their duties the keeping up of communications between all the subdivisions of the Army.

The chief signal officer has assigned to that work what is known as the land division. That name probably gives the best distinction between the air division which Col. Arnold has explained and our division. Our program proceeds a little differently from that of the air program. They have been able to go right ahead, independent of the fighting troops, whereas our progress is blocked out along with that of the troops of the line, the Infantry and Artillery, and the divisions as they are organized.

The CHAIRMAN. Have you a detailed statement in regard to the personnel?

Maj. COLE. I have several items here. I can tell you how the enlisted men will be divided in grades.

The CHAIRMAN. I wish you would tell us that.

Maj. COLE. The total number of 50,054 men will be divided in this way: 1,001 master signal electricians at a salary of \$81 a month; 3,504 sergeants, first class, at \$51 a month; 5,005 sergeants, at \$44 a month; 500 chauffeurs, first class, at \$51 a month; 10,010 corporals, at \$36 a month; 1,001 horseshoers, at \$38 a month; 1,001 chauffeurs, at \$44 a month; 1,001 cooks, at \$38 a month; 22,524 privates, first class, at \$33 a month; and 4,507 privates, at \$30 a month. That makes a total of 50,054 men for which we now requesting authority.

I might add one thing more that will make our side of it pretty clear. We now have authority for 38,000 men. Of those, 25,000 belong to the field battalions. Each one of the field battalions is assigned to each tactical division, forms an integral part of it, and takes care of the interior communications of that division. That

accounts for 25,000 of the 38,000 men; 6,000 more are used with telegraph battalions. One telegraph battalion is with each Army corps, and an Army corps is made up of six divisions, so that the ratio of the telegraph battalions to the field battalions runs about one to six. That accounts for 31,000 of the men.

Then about 5,000 more are used to form the replacement battalions, which are called depot battalions, and to care for the highly specialized technical units. One is engaged in France on research and inspection work, trying to develop something else that will be better than what they have already found; and then there are a great many highly specialized telegraph operators, experts in handling duplex and quadruplex circuits. These depot battalions include about 5,000 men. Then there are the miscellaneous detachments, such as the radio and meteorological and pigeon detachments, which make up the remainder of the 38,000 men we are now authorized to have.

The CHAIRMAN. Will you give the number of officers and men in those special technical organizations?

Maj. COLE. Yes, sir. The officers and enlisted men now on duty with the photographic, radio, pigeon, and meteorological divisions of the Signal Corps are made up in the following way: Photographic divisions, 1 major, 8 captains, 26 first lieutenants, 15 second lieutenants, and 256 enlisted men; pigeon division, 1 major, 1 captain, 2 first lieutenants, 5 second lieutenants, and 727 enlisted men; radio division, 1 major, 7 captains, 13 first lieutenants, 34 second lieutenants, and 101 enlisted men; meteorological division, 2 majors, 1 captain, and 23 enlisted men. The last named unit is simply getting a start now. The meteorological people have had considerable trouble in getting the class of men. Their duties are to do the prognosticating of weather conditions in the field of operations, and they have a difficult time in finding the type of men they need for that. That makes a total in the divisions I mentioned of 5 majors, 17 captains, 41 first lieutenants, 54 second lieutenants, and 1,107 enlisted men.

Mr. TILSON. As compared with the Infantry organizations, it would seem that your enlisted personnel is quite top heavy with non-commissioned officers. Do I understand correctly that these non-commissioned officers' places are used largely as a sort of special compensation for highly skilled men, and the increased pay chevrons are a part of the compensation for men who are above the average common laborer, who could be used as a private, but who could not be used very largely in your outfit.

Maj. COLE. That is exactly correct. I am not as old in the Signal Corps work as a great many other officers, but my understanding of the policy in the past is that it has been that these men have devoted many years of their lives to perfecting themselves in their work, which you might call the art of telegraph operating and the repair of electrical instruments. That is something we all feel is a little above the work of a common laborer, as it takes a man a certain length of time to perfect himself in it. There is very little rough labor that they are called on to do.

Mr. GREENE. Is it not true that their work is largely done individually, or in small groups, and to each one there is attached more

the usual responsibility, and that these men work sometimes on their own initiative?

COLE. I would say practically all the time.

GREENE. That is in contradistinction to the familiar sight of an organization with a few officers and a great many men, who do as they are told.

COLE. Yes, sir; there is no mass effect about it. It is detached

CALDWELL. You stated that we could get a rough estimate of the many men we needed in the Signal Corps proper by figuring one per cent of the line, and the 50,000 men you have asked for would be about that percentage of an army of a million and a half

COLE. Yes, sir; if they were all in the field.

CALDWELL. If we had an army in the field of a million and a half men on the other side, and then had a million and a half men on this side, you would have to have 100,000 men in your corps?

COLE. Yes, sir. Let me modify that statement. This 50,000 includes the overhead. We have to make a start by putting the top fellow first.

CALDWELL. As a matter of fact, if we had 3,000,000 men, 3 per cent of them would be 90,000 men, for your corps?

COLE. Roughly; yes, sir.

CALDWELL. So if we decide to appropriate for an army of 1,000,000 men we would have to double your present request for personnel in the Signal Corps?

COLE. Yes, sir. There is one point about that; that these officers and men in the Signal Corps will be sufficient to take up the job for the number of men you have authorized in the

if the President calls for another draft, we can figure that out in this way: For every 500,000 men there will be, roughly, 16 battalions, three corps, and one army, which will call for 20 field divisions of our kind of troops, 6 telegraph battalions, and 2 depot divisions, or that would be not quite 90,000 men, which would be 40,000 and 30,000 and 35,000 added to the present number of 50,000.

ANTHONY. Do you think that it is necessary to maintain a separate organization of the Signal Corps proper? If you have 100,000 Signal Corps troops on the other side with an army of 1,000,000 men in the field, do you think it is necessary to have 100,000 more on this side, if we have a million and a half men in training?

In other words, is it not only necessary to have sufficient personnel of your men to supply the needs of the fighting army?

COLE. We have to be training at the same time that the line Army is training.

ANTHONY. Well, you can be training your men, but is it necessary with all these units of Infantry to train along with them the same number of Signal Corps organizations?

COLE. Yes, sir. We try to get a start wherever we can, because we have to do more than the others have to do.

CALDWELL. The request for personnel being a flexible request, you put into the record the number of men and the cost, so that

we will be able to know how much we will have to appropriate if we are going to have an army of a certain size?

Maj. COLE. How much it will cost for the pay of the men in each grade?

Mr. CALDWELL. Yes.

Maj. COLE. Yes, sir; I will do that.

Mr. CALDWELL. For each increase of 500,000 in the Army.

Maj. COLE. Yes, sir.

(The matter referred to is as follows:)

Enlisted men in grades required by the land division of the Signal Corps, as follows:

Master signal electricians, 1,001 at \$81 per month	\$81, 081
Sergeants, first-class, 3,504 at \$51 per month	178, 704
Sergeants, 5,005 at \$44 per month	220, 220
Chauffeurs, first-class, 500 at \$51 per month	25, 500
Corporals, 10,010 at \$36 per month	360, 360
Horseshoers, 1,001 at \$38 per month	38, 038
Chauffeurs, 1,001 at \$44 per month	44, 044
Cooks, 1,001 at \$38 per month	38, 038
Privates, first-class, 22,524 at \$33 per month	743, 292
Privates, 4,507 at \$30 per month	135, 210
Total	1, 864, 487

Cost per annum (pay) of 50,054 men in Signal Corps, \$22, 373, 844.

Officers and enlisted men on duty with photographic, radio, pigeon, and meteorological divisions.

Division.	Majors.	Captains.	First lieuten-ants.	Second lieuten-ants.	Enlisted men.
Photographic	1	8	26	15	256
Pigeon	1	1	2	5	77
Radio	1	7	13	34	101
Meteorological	2	1			23
Total	5	17	41	54	1, 107

Mr. ANTHONY. How are your land Signal forces distributed in this country now?

Maj. COLE. Wherever there is a division; we have about forty-two divisions, and with each division you will find a field battalion.

Mr. ANTHONY. That is, wherever there is a division of National Guard at one of the National Guard camps you will find an appropriate number of Signal troops?

Maj. COLE. Yes, sir.

Mr. ANTHONY. How about the drafted men in the cantonments? Have you Signal organizations for them, too?

Maj. COLE. Yes, sir.

Mr. ANTHONY. In proportion to their numbers?

Maj. COLE. Yes, sir.

Mr. ANTHONY. Where are your depot battalions?

Maj. COLE. They are both at Fort Leavenworth, sir. We have not been able to get any other places to organize all we want, but we are organizing them as fast as Gen. Pershing calls for them.

Mr. SHALLENBERGER. Is the depot battalion a sort of gathering place for officers who have not been assigned to any regular duties?

Maj. COLE. No; it is not exactly that. If there are, for instance, telegraphers wanted out at the front, they will go back to the depot battalion to get them; they take the raw men and try to make them finished products before they are sent to the front.

Mr. SHALLENBERGER. Have you more officers than privates in the depot battalions at Fort Leavenworth?

Maj. COLE. No, sir.

Mr. ANTHONY. The proportion is just the other way, is it not?

Maj. COLE. Yes, sir.

Mr. ANTHONY. They are primarily for the enlisted men?

Maj. COLE. Yes. The authorized strength for a depot battalion is 15 officers and 400 men.

Mr. SHALLENBERGER. Do you think that is what it is now?

Maj. COLE. Our figures vary from day to day at Fort Leavenworth, because that is the place where the men go to be inducted for our division. According to our last reports there were about 800 inducted men. What the situation is just now I do not know, but I do know that there are about 12 officers there.

Mr. SHALLENBERGER. I am glad to hear you say that. The reason I asked that question is because I have been told several times that the depot battalions have been used as places where idle officers are being kept, and that there are practically no privates there at all.

Maj. COLE. It is not that way in our case.

Mr. NICHOLLS. Is Fort Leavenworth a pretty good place to have that depot battalion?

Maj. COLE. It is fine, except for this time of the year. There is one thing about Fort Leavenworth, and that is that they have some shelter out there.

Mr. ANTHONY. While we are on that subject, I want to ask Maj. Cole if he has seen the Signal Corps cantonment out there.

Maj. COLE. No, sir. I have not been out there since I graduated from the Signal Corps school.

Mr. ANTHONY. I want to say that that is one of the most complete and comfortable small cantonments I have seen.

The CHAIRMAN. We will now be glad to hear Col. Edgar. Colonel, you are at the head of the construction branch of the Aviation Section of the Signal Corps?

Col. EDGAR. Yes, sir.

The CHAIRMAN. Will you tell us something of your previous business experience?

Col. EDGAR. I am a colonel in the Signal Corps. I entered the service in May, 1917, and have been in charge of the construction division of the Aviation Corps since May 21, 1917. I am president of the Continental Sugar Co., of Toledo, Ohio, managing partner of W. H. Edgar & Son, warehousemen and distributors of sugar at Detroit, and I have been building in my own behalf various types of buildings since 1903.

The CHAIRMAN. How long did you say you have been connected with the Signal Corps?

Col. EDGAR. The construction division of the Signal Corps was created on May 21, 1917. I had been in Washington about two weeks prior to that time at the request of Gen. Squier and Mr. Coffin.

The CHAIRMAN. Will you state to the committee the number of camps that have been constructed, and where they have been constructed?

Col. EDGAR. The number of camps constructed under the construction division of the Signal Corps at the present time is 23. There are 5 camps that are being built, 2 at Arcadia, Fla., 1 at Montgomery, 1 at Lonoke, Ark., and 1 at San Antonio, Tex. That leaves 18 fields at which there are troops flying.

Of these 18 there are 2 at Fort Worth, Tex., being used by the Royal Flying Corps with which you are probably familiar.

There is a field at Dayton, Ohio, called McCook Field, which is used entirely for experimental purposes in connection with the Liberty motor and United States war planes.

There is a field called Langley Field, near Newport News, Va., which is the original field for experimental work. There has been concentrated the work of the foreign Liaison officers who have been sent here with planes.

The program was originally to construct 24 new fields. We had when we started a little field at Essington, Pa., a field at Mineola, and a field at San Antonio in operation. The Essington field was used for hydroplanes, and has since been turned over to the Navy. We have built along the lines I have outlined to you.

The CHAIRMAN. They were built under your direction?

Col. EDGAR. They have all been built under my direction.

The CHAIRMAN. And not under the direction of the Quartermaster General's Department?

Col. EDGAR. No, sir. The advisory committee on aeronautics had knowledge of two fields at the start, that could be operated on, one near Mt. Clemens, Mich., and one near Dayton, Ohio. Those two fields were all we knew of on the 21st day of May, and two officers (Gen. Saulois and myself) went out and passed on those two fields, and located another field at Rantoul, Ill.

The field at Belleville, Ill., Scott Field, cost \$1,534,474.27, up to yesterday. At the Belleville Field we ran down a well and struck salt water, after making some local inquiries and being guaranteed that there was good water there. So we had to put in a seven-mile pipe line into Belleville to get the water from the Mississippi River, increasing the cost of that field a good deal over what it should have been.

We think it is one of the prettiest locations we have.

The Love Field at Dallas, Tex., cost \$716,301.09.

The McCook Field, at Dayton, Ohio, is an experimental field. It has not capacity for personnel nor for maneuvers, but is used in connection with the work on the Liberty motor. It cost \$450,362.70.

The Wilber Wright Field at Dayton, Ohio, has cost \$2,564,510.74. I have some other building operations. The balloon school at Fort Omaha, Nebr., cost \$475,303.08. Then there is at Fort Sill, Okla., an aerial observers' school. That was built in connection with the artillery school of fire, to teach the spotting of artillery, and has cost \$1,099,414.91. We have a balloon battalion there, with housing to the amount of \$172,291.23.

We have three fields at Fort Worth, Tex. The Taliaferro No. 1 field cost \$910,806.62, Taliaferro Field No. 2, cost \$884,502.94, Taliaferro Field No. 3 cost \$663,354.84. Those fields were all laid out under an agreement with England, for a certain capacity for the

of the Royal Flying Corps. They shipped down nearly double personnel expected, and as we had to take care of them in some we provided them with a few additional buildings.

. ANTHONY. Can you designate the cost of the buildings and cost of the ground; can you separate those?

l. EDGAR. I have that only on one field. On Selfridge Field, is the most expensive proposition we have gotten into.

. ANTHONY. Can you put into the record a statement or a table giving the cost of the buildings, and the cost of the grounds, separately?

l. EDGAR. Yes, sir.

	Cost of field.	Roads, sewers, grading, and drainage.	Buildings.
le, Scott Field.....	\$1,534,474.27	\$654,474.27	\$900,000.00
Love Field.....	718,791.73	68,791.73	650,000.00
repair depot.....	193,712.02	29,712.02	170,000.00
, Fairfield warehouse.....	551,330.76	26,330.76	525,000.00
, McCook Field.....	450,362.70	20,362.70	430,000.00
, Wilbur Wright Field.....	2,577,046.29	777,046.29	1,800,000.00
naha, Balloon School.....	428,703.08	20,703.08	408,000.00
l, post field.....	1,099,414.91	249,414.91	850,000.00
l, Balloon School.....	123,291.23	12,291.23	110,000.00
ro No. 1 Field.....	910,108.64	200,108.64	650,000.00
ro No. 2 Field.....	884,502.94	234,502.94	650,000.00
ro No. 3 Field.....	603,585.84	63,585.84	600,000.00
r Field.....	1,239,201.51	489,201.51	750,000.00
n, Ellington Field.....	1,866,959.22	406,959.22	1,400,000.00
polis repair depot.....	144,616.34	16,616.34	128,000.00
arles, Gerstner Field.....	1,989,273.76	489,273.76	1,500,000.00
is, Park Field.....	1,548,763.07	388,763.07	900,000.00
own warehouse.....	558,363.20	78,363.20	480,000.00
, Hazelhurst Field.....	3,182,616.50	252,616.50	2,950,000.00
n Camp.....	970,836.37	80,836.37	830,000.00
Clemens, Selfridge Field.....	1,946,185.08	996,185.08	950,000.00
l, Chanute Field.....	1,015,578.64	61,578.64	950,000.00
nd warehouse.....	945,239.73	20,239.73	925,000.00
onio, Kelly Field.....	2,490,634.42	190,634.42	2,300,000.00
orio, Brooks Field (estimated).....	800,000.00	150,000.00	650,000.00
Rich Field.....	901,136.95	201,136.95	700,000.00
l Falls, Call Field.....	821,672.60	121,672.60	700,000.00
, Ark., Eberts Field (estimated).....	800,000.00	150,000.00	650,000.00
, Fla., Carlstrom Field (estimated).....	800,000.00	150,000.00	650,000.00
, Fla., Dorr Field (estimated).....	800,000.00	150,000.00	650,000.00
mery, Taylor Field (estimated).....	800,000.00	150,000.00	650,000.00
otal.....	33,592,991.86	7,179,991.86	26,413,000.00

l. EDGAR. The Langley Field job is not complete yet. It consists of temporary buildings and some permanent structures. We spent there \$1,209,597.97.

le Ellington Field at Houston, Tex., has cost \$1,866,959.72.

Aero Repair Depot at Indianapolis, for repairs to engines and parts, has had spent on it so far \$144,000. When the bill appropriating \$640,000,000 was passed we did not know that that repair depot was necessary at all. We have since found that in the case of engines wrecked which can not be repaired within 48 hours it is more economical to put them into a machine repair shop than to attempt to repair them at the field. The estimate for that repair shop at Indianapolis was \$527,000, of which we have spent, as I said, \$144,000.

le Gerstner Field, at Lake Charles, La., has cost \$1,996,651.99.

le field at Lonoke, Ark., the Eberts Field, is under construction, there has been only \$27,000 spent on it up to this time. The estimate for that field was \$800,000.

The Park Field, at Memphis, Tenn., has cost \$1,803,821.58.

The Hazelhurst field and concentration camp, at Garden City, N. Y., is in addition to a flying field a recruit camp, where all the aviation troops are sent before they are sent overseas. This consists altogether of housing. It has 27 sets of barracks, so that we can accommodate 27 squadrons at a time, and the cost of that field has been \$3,117,610.50 altogether.

At Montgomery, Ala., on the Taylor Field, we have only spent so far \$110,000.

The Selfridge Field, at Mount Clemens, Mich., has cost up to date \$1,691,764, and there has been one overseas camp built at a cost of \$642,491.90. That will give you a clue as to what the materials and the fields cost. That is the actual building material, f. o. b. dock in New York, in June. We got an order in May to get that material and ship it across, and we had it on dock in New York on June 15 and everything ready to go overseas.

The CHAIRMAN. That is not the cost set up in France?

Col. EDGAR. No, sir.

The CHAIRMAN. What is it going to cost when you get it over there; that is, the work of setting it up?

Col. EDGAR. I can not give you those figures now.

The CHAIRMAN. Will it be three or four times as much as that?

Col. EDGAR. No; that field will cost probably, about twice that amount.

The CHAIRMAN. Did you buy a field over there?

Col. EDGAR. The field was furnished by France, and was in shape to put these buildings up on, and the material and labor are about fifty-fifty. If you spend \$100,000 for materials, you can figure almost certainly that it will cost \$100,000 more for labor to put up the buildings.

At San Antonio, Tex., Camp Kelly, we built a double unit and extended the single unit. The figures for that are \$3,486,355.70. The estimate for Brooks Field at San Antonio, Tex., was \$800,000, but only \$50,000 has been spent. On the Rich Field, at Waco, Tex., there has been spent \$821,672.60.

The CHAIRMAN. How did you let the contracts for the construction of the buildings?

Col. EDGAR. These contracts are let to contractors designated by the Emergency Construction Committee of the Council of National Defense. The original three fields were let on a letter which I gave the contractors, telling them that the emergency existed and that we had to build the fields. I took the responsibility myself of starting them, and later on the Emergency Construction Committee authorized a letter, and then the contract was drawn by Mr. Whaley, who was an attorney for the Council of National Defense. That contract was approved by the Secretary of War, and the form used by the Quartermaster General was used by us. All the contracts for these fields are let on a percentage basis, and on jobs the size of these compensation is 7 per cent.

The CHAIRMAN. You mean that percentage varies?

Col. EDGAR. It varies according to the size of the job. When the amount of the job runs to \$4,000,000 or \$5,000,000, the percentage is reduced. That percentage table is fixed in the contract; it is printed in the contract.

Mr. ANTHONY. It starts at 10 per cent?

Col. EDGAR. Yes, sir; and as the size of the job increases, the percentage decreases.

The CHAIRMAN. Ten per cent is the highest?

Col. EDGAR. Ten per cent is the highest. In the allotment of these funds that were turned over to our division, there was \$54,128,047 turned over for the building of buildings and the purchase of land in the United States and abroad. We have spent and contracted for work amounting to \$40,577,235, and we have the balance or surplus of \$13,506,812.

Mr. GORDON. How much of that amount was spent on land?

Col. EDGAR. The amount of money spent for land has been very small, about \$8,000 for the site for a warehouse at Dayton, Ohio. We found there a peculiar case, that we were on a gravel bed, and that we could build a fireproof reinforced warehouse as cheap as a frame one. We could not build a permanent building except on land owned by the Government, so we purchased that piece of land.

The CHAIRMAN. That is the only site you have purchased?

Col. EDGAR. That is the only land my division has purchased. Langley Field and Keely Field No. 1 were purchased before the division was created.

The CHAIRMAN. These places you have mentioned are the only places where land was purchased?

Col. EDGAR. Yes, sir.

The CHAIRMAN. The other sites are all rented?

Col. EDGAR. They are all rented on a basis of three years, with a fixed rental, and a fixed option to purchase, in every case. We did not know where these funds would come out, and how the expenses might pile up, and so we were obliged to get an option, not increasing from year to year, but a fixed option, at the same price that we could get two years from now, and we thought that was the proper thing to do under the circumstances.

Mr. ANTHONY. Are any of the fields donated to the Government—that is, the use of the fields—by communities?

Col. EDGAR. We have only one field which we are renting for a dollar a year.

Mr. ANTHONY. Where is that?

Col. EDGAR. That is Eberts Field at Lonoke, Ark.

Mr. HULL. How do you decide as between the contractors for the buildings?

Col. EDGAR. We have no option in the matter at all. The contractor is furnished us by the Council of National Defense. When I first came here I made a very strong protest against the system, because I felt, with some building experience, I might know something about a contractor, and I did not want to accept him if I did not feel he was able to do a good job.

Mr. HULL. Do you know how they decide on the contractor?

Col. EDGAR. No, sir; I have no information on that. I went to see Gen. Squier about it, and he assured me that if I ran into a contractor who was recommended by the Council of National Defense, and I knew he was not what I wanted, he would fix it.

Mr. HULL. You do not know whether, all things being equal, they prefer the local man to the outsider?

Col. EDGAR. I believe, from my experience, that the local man has been taken as against the outsider; but all things being equal—and you must remember if you have a building job of a million dollars or a million and a half dollars with any contractor you may name, such as Jones & Co., for instance, and you put him to doing exactly the same thing over again on a second job, with exactly the same supervision, and the same force, you are going to pick up anywhere from \$25,000 to \$50,000 for the Government in that way.

Mr. HULL. All things being equal, your judgment would be that the local man is the best?

Col. EDGAR. Yes; because he does not disturb labor conditions in the locality.

Mr. HULL. He would save more than an outsider, would he not?

Col. EDGAR. Yes, sir; with this one exception, that if the outsider had already built one of these jobs——

Mr. HULL (interposing). I know, but I said all things being equal.

Col. EDGAR. Yes; all things being equal.

The CHAIRMAN. If you will put into the record a complete statement showing the cost of each one of these fields, the total cost and the cost of the land where purchased, the rental cost, the cost of the construction of the buildings, and the option on which you can purchase, we will be much obliged to you.

Col. EDGAR. Yes, sir; I will do that.

(The statement referred to is as follows:)

	Cost to Army.	Drainage.	Estimated.	Placed.	Cost.	Price.
Belleville, Scott Field.....	\$1,534,474.27	\$634,474.27	\$600,000.00	.....	\$7,410.52	\$121,684.00
Dallas, Love Field.....	718,791.73	68,791.73	650,000.00	.....	4,550.00	227,500.00
Dallas repair depot.....	193,712.02	21,712.02	170,000.00	.....	.....	(1)
Dayton, railhead warehouse.....	551,330.76	26,330.76	525,000.00	.....	.....	.....
Dayton, McCook Field.....	460,362.70	20,362.70	430,000.00	.....	12,500.00	360,000.00
Dayton, Wilbur Wright Field.....	2,577,046.29	777,046.29	1,500,000.00	.....	20,000.00	.....
Fort Omaha, Balloon School.....	426,701.03	20,701.03	405,000.00	.....	.....	.....
Fort Sill, Post Field.....	1,090,414.91	249,414.91	850,000.00	.....	.....	.....
Fort Sill, Balloon School.....	122,291.21	12,291.21	110,000.00	.....	.....	.....
Taftsville No. 1 Field.....	910,108.64	210,108.64	650,000.00	.....	4,132.50	64,880.00
Taftsville No. 2 Field.....	834,502.94	234,502.94	650,000.00	.....	4,431.00	84,190.00
Taftsville No. 3 Field.....	653,365.84	63,365.84	600,000.00	.....	4,480.00	64,000.00
Langdon Field.....	1,219,201.51	489,201.51	750,000.00	.....	(2)	.....
Houston, Edlington Field.....	1,866,950.23	466,950.23	1,400,000.00	.....	3,840.00	96,000.00
Indianapolis Repair Depot.....	144,616.34	16,616.34	128,000.00	.....	2,066.00	41,320.00
Lake Charles, Garstner Field.....	1,989,273.76	489,273.76	1,500,000.00	.....	1,301.20	29,344.50
Memphis, Park Field.....	1,388,763.07	588,763.07	800,000.00	.....	9,078.10	88,010.00
Middletown warehouse.....	558,363.26	78,363.26	480,000.00	.....	3,001.00	23,440.00
Mineola, Hazelhurst Field.....	3,182,616.50	232,616.50	2,950,000.00	.....	19,500.00	1,530,000.00
Morrison Camp.....	970,896.37	50,896.37	920,000.00	.....	1,479.02	51,075.00
Mount Clemens, Selfridge Field.....	1,946,985.08	996,985.08	950,000.00	.....	13,500.00	190,000.00
Rantoul, Chanute Field.....	1,015,509.64	65,509.64	950,000.00	.....	12,500.00	204,000.00
Richmond warehouse.....	945,239.72	20,239.72	925,000.00	.....	2,902.00	34,000.00
San Antonio, Kelly Field.....	2,490,834.42	190,834.42	2,300,000.00	.....	21,102.00	378,117.50
San Antonio, Brooks Field (estimate).....	800,000.00	160,000.00	650,000.00	.....	8,070.00	172,373.20
Waco, Rich Field.....	901,136.95	201,136.95	700,000.00	.....	6,900.00	138,000.00
Wichita Falls, (all Field.....	821,072.60	121,072.60	700,000.00	.....	1,280.00	64,000.00
Lonoke, Ark., Eberts Field (estimate).....	800,000.00	160,000.00	650,000.00	.....	1.00	56,000.00
Arcadia, Fla., (Carrington Field (estimate).....	800,000.00	160,000.00	650,000.00	.....	320.00	8,120.00
Arcadia, Fla., Dorr Field (estimate).....	800,000.00	160,000.00	650,000.00	.....	320.00	8,120.00
Montgomery, Taylor Field (estimate).....	800,000.00	160,000.00	650,000.00	.....	3,200.00	32,000.00
Total.....	33,502,991.96	7,179,991.96	20,413,000.00	186,219.17	171,471.64	4,091,684.20

1 Part of Love Field.

2 Government land.

3 Purchase of Langley Field completed prior to May 21, 1917.

4 Represents purchase price Kelly Field No. 1; transactions prior to May 21, 1917; payment disbursed.

Mr. ANTHONY. Did you designate the contractors for these camps, or were the contractors designated by the Council of National Defense?

Col. EDGAR. The contractors were all approved by the Council of National Defense. So far as the first three fields are concerned, when I came down here I found such a condition of delay that, coming directly from civil life, it was very irritating to me, and I started out three of those fields by choosing the contractors and giving them a letter starting them off, and the Council of National Defense approved those contractors.

Mr. ANTHONY. I understand that in the Quartermaster General's Department of the Army they have never let a contract for cantonment construction unless the contractor was first given them by the Council of National Defense.

Col. EDGAR. On the first three fields that were started in May, that was done, before we got the organization. After that the contracts in every case were let to the contractors who were named and recommended to us by the committee of the Council of National Defense.

Mr. ANTHONY. How many of these contracts for the construction of the aviation camps have been let to the lowest bidder?

Col. EDGAR. There have been no bids on any of these jobs. The contracts were all let on the percentage basis.

Mr. ANTHONY. I have in mind some small jobs that were let to the lowest bidder.

Col. EDGAR. If any such contracts have been let, they have been let outside of my department, because the instructions of the Secretary of War were that we would use this one form of contract and no other, and we have no option in the matter.

Mr. ANTHONY. How were the cantonments for the signal troops let, outside of your department?

Col. EDGAR. I built for the Aviation Section.

Mr. ANTHONY. You only built for the Aviation Section?

Col. EDGAR. I only built for the Aviation Section, except that I have helped out at Camp Alfred Vail, and Little Silver, N. J., where they had some difficulty.

Mr. ANTHONY. Who had charge of the construction for the land troops of the Signal Corps?

Col. EDGAR. The Quartermaster Corps.

Mr. ANTHONY. Of the Army?

Col. EDGAR. Yes, sir. At Little Silver they had some troops, and there was some delay in the building, and Gen. Squier asked us to help them out, which we did.

Mr. ANTHONY. What is the largest amount of profit that any one contractor has earned under your contracts?

Col. EDGAR. It is a very difficult thing to say what is profit. The biggest fee that has been earned on this list was earned on the Mincola Field. That contracting firm was a New York concern, and the amount of work done there was \$3,182,000, which would give them a fee of \$210,000. But that fee is figured on money actually expended for labor and materials. The bills are audited by our auditors on the job, and then they go to the finance division to be paid. We do not permit any of the employees to be under salaries.

Mr. ANTHONY. Did you have an arbitrary limitation on the profit of \$250,000?

Col. EDGAR. That was put in our contracts; some of them got less than that.

Mr. ANTHONY. Do you know of the case of any contractor who had reached the limit of his original contract, and was given a profit on that, and then was given additional work and additional profit?

Col. EDGAR. Yes, sir.

Mr. ANTHONY. How much would the additional profit amount to for the additional work on the same job?

Col. EDGAR. That I could not answer offhand.

Mr. ANTHONY. If all of that work had been included in one contract, the contractor's profit would have been limited to the original amount, but by giving him that work in two contracts, he is entitled to an increased profit?

Col. EDGAR. That, in some cases, was a matter of adjustment, and in some cases a matter of conditions.

At Fort Sill, Okla., we built a training camp. The estimated cost was \$800,000, and we limited the contractor to a profit on \$900,000. He has done a million dollars' worth of work, and he is very little ahead. When that camp was completed, we drew the line when we gave him the new work, and in order not to delay getting the contractor, we let the contract to him for the new work.

The CHAIRMAN. Do you expect to have this work completed during the present fiscal year, the work of constructing the camps?

Col. EDGAR. Mr. Chairman, the work we have under way the Quartermaster General is going to let us continue and finish. He has permitted us to go ahead with some other work. I think we will have our entire program, so far as the fields are concerned, completed by the end of the fiscal year.

Now, there has come into this a new feature, and that is the universities. We have built the grammar schools and in some cases we have built the high schools. But I have had within the last two or three days suggestions that we had better get out and locate gunnery schools and bombing schools, and a lot of schools that could be used in France. That, of course, will mean an additional program, but I understand there are six schools in the program of double units. Whether that work can be finished within the fiscal year, I doubt.

The CHAIRMAN. I mean the training camps and fields; that work will be completed within the fiscal year?

Col. EDGAR. These jobs will all be done and the next group of five will be done also before the first of the next fiscal year.

The CHAIRMAN. So that you will be asking for no additional appropriation next year for this particular work?

Col. EDGAR. Not for this particular work, but for the new high schools, that Gen. Squier has in his estimates.

Mr. GORDON. Has he submitted estimates for those?

Col. EDGAR. He has gotten up estimates.

Mr. GREENE. Those are for signal service schools?

Col. EDGAR. Those are for aviation advanced training schools.

Mr. GORDON. Will the funds in your hands be sufficient to pay the cost of completing this work?

Col. EDGAR. Yes, sir; we are within our appropriation. I think we will have a little bit left over.

Mr. GORDON. You have now \$13,000,000?

Col. EDGAR. I have \$13,500,000 to finish this work and complete five more schools.

Mr. QUIN. You said there are more schools contemplated?

Col. EDGAR. We have asked for authority to establish one in Georgia and one at Riverside, Cal., and a board of officers is now in the West looking at other locations for the last group of five.

Mr. McKENZIE. You spoke of building high schools and grammar schools. What did you mean by that?

Col. EDGAR. By the term "grammar school," I mean the place where the pilots are taught to fly. That is what we started to turn out.

Mr. ANTHONY. That is just the beginning?

Col. EDGAR. It is the primary training. Now comes the secondary training, and, of course, they have to be instructed in making photographs in the air and fighting in the air, how to use machine guns and how to use bombs, and to be wing shots under most difficult conditions; that is, while you yourself are moving and while the target is moving, possibly in the same direction or in different directions. The only school we have for that work is at Mount Clemens.

Mr. ANTHONY. I was thinking that it would be impossible to have a shooting range out in the country.

Col. EDGAR. We learned that these targets must be over water, so that a man can see where his bullets hit, and on the surface of a lake or surface of the ocean he can see what he is doing. They learn much more quickly over water than in any other way. In France and in Germany their schools are over water.

Mr. ANTHONY. Have you been commissioned in the Regular service?

Col. EDGAR. I have a temporary commission in the Regular service.

Mr. ANTHONY. Were you appointed from the Reserve?

Col. EDGAR. Yes.

Mr. ANTHONY. That only applies to the Signal Corps?

Col. EDGAR. That only applies on the \$640,000,000 bill. There is a clause in that bill that permits the President to issue to officers temporary commissions in the Regular Army.

Mr. ANTHONY. At the pleasure of the Secretary of War?

Col. EDGAR. Yes; upon the recommendation of the Chief Signal officer.

Somebody asked a question in regard to the cost of the buildings and the cost of materials. In the case of Selfridge Field, at Mt. Clemens, Mich., the cost of the buildings was \$900,000, and the cost of grading and preparing the field was about as much more. That ran the total cost up to \$1,946,000. We struck extraordinary conditions there.

(Thereupon the committee adjourned to meet Monday, January 28, 1918, at 10.30 o'clock a. m.)

ARMY APPROPRIATION BILL, 1919.

COMMITTEE ON MILITARY AFFAIRS,
HOUSE OF REPRESENTATIVES,
Monday, January 28, 1918.

The committee this day met, Hon. S. Hubert Dent (chairman) presiding.

STATEMENT OF MAJ. GEN. WILLIAM C. GORGAS, SURGEON GENERAL, ACCOMPANIED BY COL. C. R. DARNALL, MEDICAL CORPS, AND MAJ. BRADLEY DEWEY, SANITARY CORPS.

The CHAIRMAN. Gen. Gorgas, you are the Surgeon General of the Army?

Gen. GORGAS. Yes, sir.

The CHAIRMAN. The first item for the Medical Department is on page 54, "Medical and hospital department: For the purchase of medical and hospital supplies, including gas masks, motor ambulances, and motorcycles, for medical service, their maintenance, repair and operation, and disinfectants, and the purchase and exchange of typewriting machines for military posts, camps, hospitals, hospital ships, and transports, and supplies required for mosquito destruction in and about the military posts in the Canal Zone," and so forth, for which you are asking an appropriation of \$151,111,894. There was appropriated for this item at the last session of Congress, \$130,780,000. Will you please explain that item?

Gen. GORGAS. The amount of \$157,000,000 is our general appropriation for the Medical Department, and that includes all the items which are mentioned in the section, for medical supplies and similar things.

The CHAIRMAN. Can you put a detailed statement in the record in reference to these various items?

Gen. GORGAS. Yes, sir; but the caption of the item covers in general terms what the appropriation is intended for.

(For detailed statement see page 1158.)

The CHAIRMAN. What sized army is that estimated for?

Col. DARNALL. That is based on a million and a half men.

The CHAIRMAN. On 1,600,000 men?

Gen. GORGAS. On a million and a half men. It came about in this way. We were originally directed to make out an estimate for 3,000,000 men, and then it was afterwards changed, and we were directed to make out the estimate for 1,500,000 men.

The CHAIRMAN. Most of the other departments have been giving us figures for 1,612,245 men.

Gen. GORGAS. We were directed to make out this estimate on a basis of a million and a half men. I think that direction was in general terms, 3,000,000 men at first, and then it was concluded to

cut that number in half. I have the letter of direction as to the basis of the estimate here. It is from the Chief of Staff, dated October 19, and it says:

The Secretary of War desires that you submit a modified estimate based on an estimate of 1,500,000 men to be maintained in the Military Establishment during the fiscal year 1918-19.

The CHAIRMAN. How many men did you estimate for last year when you got \$130,780,000?

Gen. GORGAS. The first estimate was based on 2 000,000 men.

The CHAIRMAN. Then you only got \$130,000,000 for 2,000,000 men, but you are asking for \$157,000,000 for , 1,500,000 men?

Gen. GORGAS. That is in general terms, because we know more now than we did.

The CHAIRMAN. Does that mean you are going to have a deficit from last year's appropriation?

Col. DARNALL. Yes, sir. This is what that estimate was based on, 1,000,000 men for the entire year, 500,000 men for nine months, and 500,000 men for six months, making an average of 1,625,000 men for one year. That estimate of \$130,000,000 was based on that. But we find that is not enough.

The CHAIRMAN. How much will your deficit be?

Col. DARNALL. So far as we can tell at the present time, it will be in the neighborhood of \$20,000,000. New things are coming along every day. The other day we received a cablegram from Gen. Pershing, increasing the number of gas masks, and those gas masks are very expensive.

The CHAIRMAN. That accounts for the difference between the amount of the appropriation you got last year, and what you are asking for this year?

Col. DARNALL. Yes, sir.

The CHAIRMAN. This appropriation seems to authorize the construction, maintenance, repair, and operation of hospital ships. Do you contemplate having any hospital ships?

Gen. GORGAS. That question is up for decision in the department now. Either we ourselves or the Navy will have to transport the sick and wounded, and those that will be brought over from France to the United States.

The CHAIRMAN. That is an undetermined matter at the present time?

Gen. GORGAS. As to who is to look after it; yes, sir.

The CHAIRMAN. Have you reached any idea as to how much it would take?

Gen. GORGAS. We are basing our estimates on the Canadians, and what they have had to do. We can tell pretty accurately the number of men we will have to bring across. The Canadians, in general terms, have returned 10 per cent of their men as entirely disabled.

They do not bring back all of the sick and wounded. All of those who are likely to recover, and possibly be of future service, are treated in France and England, and are not brought back to Canada to be treated, and we expect to do the same with our men. We will just bring back the men who are permanently disabled, and that number will be about 10 per cent of the forces in the field.

Mr. KAHN. Your department furnishes gas masks for the Army?

Gen. GORGAS. Yes, sir.

Mr. KAHN. I saw in the papers the other day that quite a large number of gas masks were sent back here because they were found to be of practically no value on the other side. We are going to be asked about that on the floor of the House when this bill comes up. Could you explain how that happened?

Gen. GORGAS. Maj. Dewey is directly in charge of that work, and he can explain it to you in detail.

Maj. DEWEY. Early in July, the Army, in collaboration with the Bureau of Mines, which had already done considerable work for gas protection for mine rescue work, made up 20,000 masks. The bureau had had some information from abroad, and it had done some preliminary experimental work.

When those masks were on their way to France further experimental work showed that they were not suitable for the high concentrations and new gases then being used on the front. They were equal or superior to some of the gas masks then in use, but were not as good as the best British masks. At the same time it developed that the British could sell outright to our expeditionary forces a sufficient number of gas masks to last us for some time, and as their mask was then superior to any of the other masks which were then being used, this Government cabled to Gen. Pershing not to issue the 20,000 which had been sent over, and later cabled him to return them for training purposes in this country.

We then passed through a period of experiment, development, and manufacture, in which masks were made for use in the training camps. Many of those masks were a very superior product, but they were used for training purposes, both because Gen. Pershing had British masks and because it was very essential to start at the earliest possible moment to give our troops preliminary training in gas protection.

We have, since the 1st of January, been shipping comparatively large numbers of our own gas masks to Gen. Pershing. Those masks have not arrived as yet. We have had no time to receive a cable from him telling us what his opinion is of those gas masks.

We have, however, written expressions of opinion from British experts, men very high in the British antigas service, and those men have said that as far as protection is concerned, our mask is superior to anything now used by any army.

These masks are, as a matter of fact, a few ounces heavier, than the British masks, and this question with regard to the weight is one that is now under discussion.

There were never, as the newspaper articles stated, 200,000 gas masks sent over. There were never such a large number sent to France. The number sent over was 20,088, and they were never issued to our troops. I understand, from those who saw the boxes in which they came back, that it is probable that not more than three boxes were opened in France.

Mr. KAHN. Then as I understand it, the request for their return to this country, came from your department, and did not come from Gen. Pershing?

Maj. DEWEY. There was a large group of cablegrams on that subject, which fit into and knit into each other. The gas service,

as a service, was not organized at that time and our cables had to go through several hands, finally getting to the War College, before coming to us, and I am not able to say, as a matter of record, whether Gen. Pershing's comments with reference to those things arrived first, or whether our orders first were received abroad. The fact is that we knew we wanted the masks back before they arrived.

Mr. KAHN. Have you a sufficient number of gas masks now to supply all the forces who are over there?

Maj. DEWEY. No; we have not.

Mr. KAHN. Are you getting enough from England to supply them?

Mr. DEWEY. Yes, sir; the forces in the field are well supplied.

Mr. KAHN. How soon do you think it will be when we will be able to supply our troops over there with the gas masks made by us?

Maj. DEWEY. We are not fully informed of the exact number of troops over there, but my estimate is that it will be about the 1st of April.

Mr. KAHN. We were told that there are * * * troops over there now, and of course, a great many of them are engineering troops and are not in the line. I imagine that we have about * * * fighting troops over there. Have you anywhere near that number ready?

Maj. DEWEY. There will be over 150,000 gas masks on the way to Europe before the end of February, unless there are some more Fuel Administration orders, or things of that kind. Everything we say to-day is dependent upon industrial uncertainty, so far as the production of that type of gas mask is concerned.

Mr. GARRETT. How does the Fuel Administration by its orders affect the making of war material?

Mr. KAHN. Will the fuel orders interfere with your manufacturing of those gas masks?

Maj. DEWEY. Even if we can obtain an exemption for a rubber company, it may seriously interfere in this way. The rubber company makes molded parts in heavy steam presses in a room containing several hundred presses, and they may be only operating four presses on our material. Under such circumstances you can not expect any company to charge their entire steam line of a power plant with thousands of horsepower, and suffer condensation losses all through the plant, in order to operate four presses on our work. So, even though we get an exemption for a shop doing our work, it does us no good. Secondly, our program to-day is largely dependent upon the rate at which the rubber companies can obtain the complicated molds and machine-made parts of that type. Those are made for the rubber companies by subsidiary outside contractors, such as small machine shops, and it is not possible to obtain, and, in fact, we have been refused an exemption for all of those small machine shops, so that in that way we are very seriously affected by the orders of the Fuel Administration.

Mr. KAHN. Do you think you could get relief by presenting this matter in detail to Dr. Garfield? Have you tried to get relief?

Maj. DEWEY. We have tried to get relief, and we have been refused.

Mr. KAHN. You have failed in that?

Maj. DEWEY. We have failed in that.

Mr. KAHN. What is the approximate cost of one of these gas masks?

Maj. DEWEY. Approximately \$7.50.

Mr. KAHN. Do you know how much the English masks cost?

Maj. DEWEY. I do not. The only costs I have had are not what we call the true costs in this country. The question of overhead and matters of that kind are left out, and we have no idea as to what an accountant would say the cost is, and we have been unable to determine it.

Mr. SHALLENBERGER. What did Gen. Pershing have to pay for those masks he got?

Maj. DEWEY. I do not know.

Mr. KAHN. From whom did he get the authority to purchase the English gas masks?

Gen. GORGAS. I think he has full authority for all those things.

Mr. KAHN. From the Secretary of War?

Gen. GORGAS. Yes, sir.

Mr. KAHN. Can you put into the hearings a statement showing what Gen. Pershing paid for those masks over there?

Col. DARNALL. We would have to cable to him for that. They do not advise us every time they buy things as to what the cost is.

Gen. GORGAS. I think we can get that.

Maj. DEWEY. In that connection, we have taken up, unofficially, with the British, the advisability of their supplying us permanently and have been told, unofficially, that their labor shortage precludes any permanent arrangement for that sort of thing.

Mr. KAHN. So that you will have to depend in a large measure on the masks manufactured in this country?

Maj. DEWEY. From this time on; yes.

Gen. GORGAS. You understand, Mr. Kahn, that all the troops on the other side who need the masks are supplied with them at the present time.

Maj. DEWEY. With an abundant quantity in reserve.

Mr. KAHN. I saw a statement in the newspapers not long ago that the Germans are now using an odorless gas, and that you can not smell it, as you have been able to smell the gas heretofore. Have you any reports about that?

Maj. DEWEY. The latest reports we have are that that statement is not entirely true. There is, however, some foundation for it in that the odor of the latest German gas is comparatively slight, instead of being pungent, and taking hold immediately. It resembles garlic. It is no more than the ordinary garlic smell.

Well-trained troops are now trained to recognize this garlic odor, as they recognize the odor of the stronger gases, and they have no more casualties from that gas than from the other gases.

Mr. KAHN. What are we doing in the manufacture of gases, and in the use of gases by our troops in that kind of warfare?

Maj. DEWEY. That is a matter that the Ordnance Department can inform you about.

Mr. KAHN. They are manufacturing the gas bombs?

Maj. DEWEY. Yes, sir.

Mr. KAHN. I would like to ask you, General, about the difficulty you have had, which was reported in the papers a day or two ago, with some of the young lieutenants in your corps who refused to take in sick men who were sent to the hospital, who were left standing in the rain, died in consequence of neglect. Can you tell this committee just what that situation was?

Gen. GORGAS. The report on that has not come in as yet. I saw that in the newspapers, but I know nothing more about it than what the papers state. I can get the information for you.

Mr. KAHN. I wish you would do that, because that is another matter that will be discussed on the floor of the House when this bill comes up, and I know the chairman feels that we should have all that detailed information in order that we may be able to inform the House about it.

NOTE.—The case referred to by Mr. Kahn was not sufficiently clear to enable this office to locate the names of the lieutenants and make investigation.

Mr. TILSON. General, have you any way by which you can get real information, and get it quickly, without having to be involved in a lot of formal red-tape methods, and consequent delay? Have you any real way of getting information about things of the kind that have been mentioned, as a business concern would get information in reference to any matter it heard about, such as ugly rumors?

Gen. GORGAS. What we do in a case like that is this: If we can get enough information so that we can locate the man, we send a man right down there from my office.

Mr. TILSON. To make a personal investigation?

Gen. GORGAS. To make a personal investigation; yes, sir. We have a great deal of information coming from the various camps through official channels.

Mr. TILSON. Where there is an ugly rumor of some sort which is, perhaps, without foundation of any kind, you have a way of trying to nail it without having to depend on roundabout red-tape methods?

Gen. GORGAS. Yes; sometimes I go myself.

Col. DARNALL. We are investigating a report now that has come from one of the camps, to the effect that there are no stimulants in the hospital there for pneumonia cases.

Mr. TILSON. That is not an investigation at all, because you may send your wire or your letter to the very person who was responsible for the thing. I do not believe in following out every single rumor that comes to your ears, but there are ways of getting information, not necessarily through the regular channels, which are sometimes actually blocked for some reason or other.

Col. DARNALL. The Surgeon General has his regular inspectors, and he sends those men around.

Gen. GORGAS. We have one special force of outside men for that sort of investigation, and where the matter is particularly important we send a special inspector from my own office.

Mr. KAHN. You have discharged from the medical service quite a number of men whom you found were not equal to the work?

Gen. GORGAS. Yes, sir.

Mr. KAHN. Do you know how many men you have discharged?

Gen. GORGAS. I can get you those exact figures—854 men up to February 7.

Mr. KAHN. When you accept a man into your department for a commission, you do not go behind his college diploma, do you?

Gen. GORGAS. The general method is that they are required to have a certain amount of education, which can be determined on the face of the diploma. Then examination blanks are sent to the local boards in the various States or localities, who have the man

come before them, and they examine him. Then those examination papers come back to us, and we refer them to a board of men we have here for the purpose of passing upon those papers, grading them, etc. Those are men who are prominent in the medical profession. Dr. Mayo is a member of that board. The idea in having such a board is that the members of that board are men who would have a general knowledge of the medical profession. Then we have always referred to such organizations as the American Medical Association and asked them whether there is anything against any particular man's character in their files. That is the general method. Of course, the men are physically examined also.

Mr. KAHN. You take every step you can that is possible to determine the qualifications of a man before you commission him?

Gen. GORGAS. I think they are very well selected.

Mr. KAHN. How many officers have you in the medical department at this time?

Gen. GORGAS. This morning there were on duty 17,000.

Mr. KAHN. How many officers do you expect to have when your corps is fully filled up, for the number of men that will be in the service in the near future, namely 1,612,245?

Gen. GORGAS. I think we have almost enough to meet the demand now.

Mr. KAHN. You mean that 17,000 will be enough for an army of that size?

Gen. GORGAS. Yes, almost. That includes the whole medical department, the veterinarian corps, and the dental corps, too. Of the doctors, proper, we have about 15,000 on duty now.

Mr. KAHN. That would be——

Col. DARNALL. That is about 10,000 per million men.

Gen. GORGAS. It would be approximately that. The law would give us, for the Regular Army, seven doctors for a thousand men. For a million and a half men, it would be about that number.

Mr. KAHN. How many men have you in the hospital reserve corps?

Gen. GORGAS. You mean enlisted men?

Mr. KAHN. Yes.

Gen. GORGAS. There are about 20,000 in all.

Mr. KAHN. Is that corps pretty well filled up?

Gen. GORGAS. We are not using our Reserve Corps. The enlisted personnel we have——

Mr. KAHN (interposing). That is what I referred to.

Gen. GORGAS. We have about 80,000. The enlisted Reserve Corps is a fine thing. We get the men for that corps as they are called.

Mr. KAHN. Are those men not with the troops at the present time, and ready to be called?

Gen. GORGAS. The 80,000?

Mr. KAHN. Yes.

Gen. GORGAS. They are principally with the troops now. We are allowed more than these, and we are not quite filled up, and we are getting more.

Mr. KAHN. I see that pneumonia has been playing havoc with the boys in the various camps. Has that been due to the conditions at the cantonments, largely?

Gen. GORGAS. Principally due, I think, to an epidemic of measles. I do not think it bears much relation to the conditions at the cantonments.

Mr. KAHN. No overheating of the quarters at the cantonments and then allowing the men to go out into the cold, that you are aware of?

Gen. GORGAS. No; I think not. It was principally in the National Guard camps, and they were poorly heated.

Mr. KAHN. I understand that pneumonia often results from measles, that it is an aftermath of measles, and there is no way of preventing measles breaking out when so many young men come to those camps from all sections of the country, and in all wars we have had epidemics of measles and mumps; so that it is nothing unusual at this time.

Gen. GORGAS. I think that is generally the case, in bringing a large body of troops together. It depends upon the character of the troops.

Take, for instance, Camp Wheeler, at Macon, Ga. We had that there more than anywhere else, and the troops located at Camp Wheeler are southern troops, from sparsely settled States like Georgia, Alabama, and Florida. We have about 30,000 men at Camp Wheeler, and we have to-day at that camp about 3,000 cases of measles. That practically means that there were 3,000 out of 30,000 men who had not had measles before.

Mr. KAHN. How many troops did you say there are at Camp Wheeler?

Gen. GORGAS. There are a little over 30,000 at the present time.

Mr. KAHN. So that 10 per cent of the men there became ill with measles?

Gen. GORGAS. About that. That probably meant that, when they went, there were about 10 per cent of those men who had not had measles in childhood.

But if you go to Spartansburg, S. C., where there are New York troops, you will find that we have practically no measles, probably not more than two or three hundred cases in the whole camp. That means that out of practically the same number of men as there are in Camp Wheeler, of those men who went down there from New York, a great many of them, probably a majority of them from the big cities, there were only about 300 men in that total number of about 30,000 who had not had measles in childhood.

Mr. KAHN. That is only about 1 per cent?

Gen. GORGAS. Approximately that.

Mr. KAHN. Have you had the usual success with your typhoid serum?

Gen. GORGAS. We have had very great success with that.

Mr. KAHN. The cases of typhoid have been remarkably few?

Gen. GORGAS. Very few.

Mr. KAHN. Do you treat everybody who goes into the service?

Gen. GORGAS. Everybody is required to be vaccinated.

Mr. KAHN. What about the venereal diseases?

Gen. GORGAS. The situation in regard to venereal diseases is in excellent shape, and we are now having a fewer number of cases than we had in time of peace. There was a very big rise in the number of

cases when the men first came in, but that number has been decreasing until now we have less than we have in time of peace.

Mr. KAHN. Are you getting salvarsan?

Gen. GORGAS. Yes.

Col. DARNALL. We are getting what we can in this country. We have three firms who make the American salvarsan, and we are getting their entire output.

Mr. KAHN. Do you find that the American salvarsan compares favorably with the imported article?

Col. DARNALL. It is very good indeed. We are now making arrangements to have more of it made in England.

Mr. KAHN. We have seen something in the newspapers about the venereal diseases affecting our boys on the other side. Have you any report in regard to that?

Gen. GORGAS. Yes; our reports show that it is a little higher on the other side than at home, but not much.

Mr. KAHN. How do they compare with the French and English forces?

Gen. GORGAS. I could not say. I got in some reference this morning in regard to the English forces during the first year, to a very limited extent, and our reports compare very well with those.

Mr. KAHN. The percentage is no higher among our troops than among the English?

Gen. GORGAS. No.

Mr. KAHN. If the number of troops that we have by the first of July should be 1,612,245 men, as contemplated by the War Department now, as I understand, would this estimate of yours amounting to \$157,000,000 be enough for such a force?

Col. DARNALL. No, sir.

Mr. KAHN. And you would begin the fiscal year with a deficit; is that right?

Col. DARNALL. We would have a deficit before the year was over.

Mr. KAHN. Practically, you would begin without enough money to carry you through the year?

Col. DARNALL. Yes, sir.

Mr. KAHN. Will you kindly put into the hearing a statement showing what additional amount you need for, say, that additional number of men; that is, 112,000, and then also what additional amount you would need for each additional 500,000 men?

Col. DARNALL. We will do that.

Mr. KAHN. Up to 3,000,000 men.

Col. DARNALL. We have it for 3,000,000 men right here.

Mr. KAHN. I would like to have the amount for each additional 500,000 men up to 3,000,000 men, and also for the 112,245 above the 1,500,000.

(The statement referred to is as follows:)

Estimates of amount required under Medical and Hospital Department for a military establishment of from 1,500,000 to 3,000,000 men—Approximations.

Items.	1,500,000	1,612,000	2,000,000	2,500,000	3,000,000
Motor vehicles:					
New equipment.....	\$6,000,000	\$6,400,000	\$7,500,000	\$8,750,000	\$10,500,000
Replacement and repairs.....	11,000,000	11,733,000	14,160,000	17,675,000	20,400,000
Printing and binding.....	700,000	747,000	880,000	1,100,000	1,320,000
Veterinary supplies:					
Medicines and antiseptics.....	11,000,000	11,815,960	14,660,000	18,325,000	21,990,000
Dressings.....	12,500,000	13,427,940	16,660,000	20,825,000	24,990,000
Instruments.....	825,000	880,000	1,040,000	1,300,000	1,550,000
Other medical and hospital supplies:					
Medicines, antiseptics, and disinfectants.....	19,000,000	20,407,920	25,320,000	31,650,000	37,990,000
Surgical dressings.....	15,250,000	16,377,920	20,320,000	25,400,000	30,480,000
Hospital equipments.....	18,000,000	19,200,000	23,100,000	28,500,000	33,900,000
Textiles.....	12,000,000	12,806,000	16,000,000	20,000,000	24,000,000
Instruments.....	2,500,000	2,667,000	3,240,000	4,000,000	4,740,000
Dental supplies.....	3,487,500	3,719,000	4,540,000	5,625,000	6,720,000
X-ray equipment and supplies....	750,000	806,000	1,000,000	1,250,000	1,500,000
Office equipment and stationery..	500,000	534,000	600,000	675,000	720,000
Gas masks.....	40,000,000	42,975,920	53,320,000	66,650,000	79,990,000
Total supplies and equipment..	153,512,500	164,587,680	202,340,000	251,125,000	303,780,000
Employees, civilian, salary and wages.....	1,539,394	1,654,334	2,052,524	2,565,655	3,078,788
Civilian Medical Service.....	750,000	806,000	1,000,000	1,250,000	1,500,000
Laundering hospital linen.....	1,000,000	1,074,667	1,333,333	1,666,667	2,000,000
Expressage on medical property.....	250,000	268,667	333,333	416,667	500,000
Gas and electricity for gas and laboratory apparatus.....	30,000	32,240	40,000	50,000	60,000
Miscellaneous items.....	30,000	32,240	40,000	50,000	60,000
Grand total.....	157,111,894	168,455,828	207,139,190	257,123,959	307,978,788

Gen. GORGAS. Anything that we may put in as a definite estimate is a rather wild guess. Within two weeks two projects have come up that we never contemplated at all. One of them was the phase of the reconstruction work in which we are expected to do a considerable part of the work for the Insurance Board. That is going to involve, if we undertake it, a considerable increase in all our expenses.

Another very large increase that we had not thought of two weeks ago was in relation to the draft men. A great many men come up for the draft with hernia, for instance. We have a project of operating upon those men who have hernia and making them fit for service. That one item in reference to hernia will mean operations on about 50,000 men, including those who have already come in.

Those are some very large expenses which we could not have looked forward to six months ago.

Mr. KAHN. I saw in the paper this morning that it is the purpose of the department to take the men who have slight ailments and allow them to be operated upon and treated in the Army hospitals, so that they will become fit for military duty, and I can readily understand that you will need more money for that. I think this committee feels—I know I feel—that we want to know how much money you are going to need for the things you have in sight.

They are trying to make somebody the goat, and it has been said that Congress has been derelict in furnishing the funds. So far as my vote is concerned, I want to furnish sufficient funds to conduct this war properly, and I would like to have those figures for that reason.

Gen. GORGAS. We can give you that fairly accurately.

The CHAIRMAN. I want to ask you some questions in reference to the gas masks you think you will get from the British. Have they an ample supply for their own army and for ours, and can they freely afford to let our army have them?

Gen. GORGAS. Maj. Dewey just answered that while we have gotten our present supply from the British, they told us they could not supply us in the future.

Maj. DEWEY. They have been able to let us have masks up to the present time, and I presume they did it quite willingly. For the future we are expected to supply our own.

The CHAIRMAN. How many have you gotten from the British?

Maj. DEWEY. I think we have obtained between 300,000 and 500,000.

Gen. GORGAS. They are purchased over there. I could get the expense and the numbers.

The CHAIRMAN. Then you are amply supplied for the present?

Gen. GORGAS. I can not say definitely about that.

Mr. TILSON. Last summer I gave some attention to this particular subject, and I was told then by an officer in your department that at that time we had made arrangements, and actually had 25,000 masks, and they were for the division we were sending over at that time, Gen. Pershing's first division, and I was furnished with a sample mask, and brought it to the House and exhibited it on the floor of the House. One of the Members of the House put it on, and it was exhibited to the membership of the House. It was a box respirator type. Is that the mask which has been furnished to our troops in France?

Maj. DEWEY. The 25,000 you speak of?

Mr. TILSON. We were told there were 25,000 masks in sight.

Maj. DEWEY. Twenty thousand masks went over and came back. Another 7,000 were never shipped. They are being used for training purposes, and the mask made to-day looks, to all intents and purposes, like the mask you had. I have one here.

Mr. TILSON. What I would like to know is whether that mask which I presented at that time as the mask we were going to use, as an improvement on anything that had been gotten up before, was actually used.

Maj. DEWEY. No; it was not used.

Mr. TILSON. What kind of mask are we using instead of that?

Maj. DEWEY. We are using the British box respirator type.

Mr. TILSON. It is the box respirator type?

Maj. DEWEY. Yes.

Mr. TILSON. Is the one you have the British type, or our type?

Maj. DEWEY. It is our type of mask.

Mr. TILSON. That is exactly the type, or at least it looks like the same type of mask I presented to the House last year.

Maj. DEWEY. This mask is not essentially different from the mask you had, but there is a difference in the chemical filling which is used and there has been an immense amount of technical development, particularly with reference to the rubberizing film right there [indicating].

Mr. TILSON. That had a rubber piece on there, and a rubberized film around there [indicating]. Is this one particularly different from the one I had?

Maj. DEWEY. The chemical composition of that rubber film is absolutely different from that of the one you had.

Mr. TILSON. In other words, while that mask would stop the ordinary chlorine gas, this mask will stop any gas that is known.

Maj. DEWEY. Yes, sir; this is a brand-new compound.

Mr. TILSON. This gas mask which you have there will stop any known gas?

Maj. DEWEY. Yes, sir.

Mr. NICHOLLS. You have to keep changing your masks, just as they do?

Maj. DEWEY. We have to keep two jumps ahead of the game.

Mr. TILSON. When I went into the subject last June I was told that a man could live in that gas mask, in any kind of gas for 10 hours, but Capt. Hines disputed it. But, at any rate, we were told that a man could stand 10 hours in gas with that mask on.

Maj. DEWEY. The British are repeatedly wearing their masks in actual gas attacks for from 8 to 12 hours.

Mr. TILSON. That is about what we were told they would stand, last year. Are there any other gas masks used along with these? Do you have a different type to use in the rear and a reserve mask of the same sort?

Maj. DEWEY. That practice has been abolished by the British, and we are following them in that, and do not have masks in reserve.

Mr. TILSON. Is it not a fact that the gas you most fear is that which is dropped upon you from shells, rather than the cloud gas, now?

Maj. DEWEY. Yes; the British have not had to withstand a cloud gas attack for a year.

Mr. TILSON. The gases you most fear now are those directed by means of shells, especially aimed at your artillery, some distance back of your front-line trenches?

Maj. DEWEY. They are used against the front-line troops, they are used for raiding parties, to combat artillery, and for many other purposes.

Mr. TILSON. But if you can drop them in the vicinity of a battery, that is a very effective use of them.

Maj. DEWEY. If you surprise the battery you put them out of business. If you do not surprise them, you make them slow down.

Mr. TILSON. If you can make the gunner work with a gas mask on, it slows him up considerably?

Maj. DEWEY. He can not work as fast with it on as he can with it off, of course.

Mr. TILSON. If you drop a few of them around a battery and the men have not their masks on, you can put them out of business, and so you can cripple the battery?

Maj. DEWEY. They are used a good deal in that way.

Mr. TILSON. You use the same mask at the front and in the rear?

Maj. DEWEY. Yes, sir.

Mr. TILSON. Does one man have more than one mask?

Maj. DEWEY. No, sir; he has only one. That is enough for him to carry.

Mr. NICHOLLS. What does that one weigh?

Maj. DEWEY. Three pounds and eleven ounces.

Mr. TILSON. We were told last year that the best guess they could make as to the price was that the gas mask would probably cost about \$14 or \$15. Is that a fair guess at the cost of that mask?

Maj. DEWEY. The cost of that mask is \$7.50.

Mr. TILSON. You have gotten it down about \$7.50?

Maj. DEWEY. I think the man who told you that was guessing at it. We were guessing that the cost would be about \$5 when we started out, and it has gone up to \$7.50.

The CHAIRMAN. How many masks do you figure on per man?

Maj. DEWEY. The average used by the British is three or four a year.

The CHAIRMAN. And each man has one for training?

Maj. DEWEY. He must be constantly trained, and the training becomes more elaborate every day. Each man must be able to put on his mask in six seconds, regardless of what type of work he is doing, and then he must be able to carry on all forms of activity with the mask on. He must be trained in wire cutting, and in trench digging, and in following the communication trench, and he must be able to do everything with his mask on, and he must be able to do it at night. The British are now laying great emphasis upon that night work.

The CHAIRMAN. He must be trained to put the mask on in six seconds?

Maj. DEWEY. The latest development in the matter of training is the use of a small paper bomb, with a firecracker in it, and pepper dissolved in a harmless gas. The British make tests with these bombs to see how long it takes a man to get the mask on, and whether the pepper makes him sneeze.

Mr. GARRETT. Suppose one of these bombs would explode near a man with a mask off, containing the most deadly gases, and they should get the smell of that gas for the six seconds between the dropping of the bomb and the placing of the mask on their faces. What would be the result of that?

Maj. DEWEY. You would have to ask the surgeon in the hospital that question. A man in that situation would go to the hospital. Whether or not he would die would depend on his luck.

The CHAIRMAN. What about the supply of chemicals you use? Have you got a good supply of those?

Maj. DEWEY. We have an adequate supply now for our present needs. We have ample capacity in sight for one of our chemicals. For the other one we are having to survey the sources of supply carefully, and may have to go to Trinidad and even to the Philippines for the materials.

The CHAIRMAN. Do you anticipate any difficulty in getting it there?

Maj. DEWEY. No. It may cost a great deal of money to bring it in.

The CHAIRMAN. The transportation question is serious?

Maj. DEWEY. Yes.

Mr. HARRISON. I notice that Gen. Gorgas said that there was a deficit on the appropriation of \$130,000,000 made last year, and I think you said that deficit would amount to about \$20,000,000 and that estimate was based on 1,625,000 men.

Gen. GORGAS. Yes.

Mr. HARRISON. How many men were there, actually? That was a deficit on an estimate for 1,625,000 men. But about how many men were there, actually?

Col. DARNALL. We have not reached the last of that period, and will not have reached that until June 30. We do not know how many men they will have at that time. If they have 1,000,000, it will be approximately as stated here. They have, as I understand it, about one million and a half men now. That is what we have to provide for.

Mr. HARRISON. I understand that, but my point was that in the appropriation of \$130,780,000 you estimated for 1,625,000 men, and there is a \$20,000,000 deficit, although there were not that number of men in the service.

Col. DARNALL. There are now about a million men in the service. It depends upon whether they have 625,000 above that number. If they have another draft, that will add 500,000 men to it.

Mr. HARRISON. It is evident, therefore, that the \$157,000,000 you are asking for would show a very large deficit, if we have the 1,625,000 men we expect to have.

You will have a very large deficit on that appropriation, if you have the deficit you have named on the appropriation of \$130,780,000.

Col. DARNALL. There is a good deal of original equipment that we have that we will not have to buy again. Furthermore, there are extra things coming in.

The other day we got a cablegram for something we had never issued. Gen. Pershing wanted a convalescent suit made of wool. He wanted that instead of our pajama suit, which costs \$1.75. I think those convalescent suits are going to cost us about \$12 apiece. If we get million of them, there will be an expenditure of \$12,000,000 which we had not considered at all.

Mr. HARRISON. I am not criticizing you, but I want to get a definite idea in reference to it.

Col. DARNALL. That is the way the shortage has occurred, and then we have all these extra things that have been thrown in, in addition to that.

Mr. HARRISON. I simply wanted to bring out the fact that with an appropriation of \$157,000,000 there will undoubtedly be a deficit, because you have a deficit with the appropriation of \$130,000,000 which was estimated for 1,625,000 men, when, as a matter of fact, you did not have anything like that number of men to provide for.

Col. DARNALL. In that estimate of \$157,000,000 is \$40,000,000 for gas masks. Gen. Pershing has asked actually for new masks for 3,000,000 men. That would be approximately \$80,000,000 instead of \$40,000,000 for gas masks. But the basis of my estimate on those gas masks was on a cost of \$9.50 instead of \$7.50 apiece, which Maj. Dewey states they will cost now.

Mr. HARRISON. Do you get any supplies through the Quartermaster's Department?

Col. DARNALL. For the construction and repair of hospitals. We have also certain quartermaster's supplies that we draw from the Quartermaster's Department, such as tentage and cooking ranges.

Gen. GORGAS. This estimate does not cover that.

Mr. HARRISON. I would like to have the same information that Mr. Kahn was asking about, in reference to these cantonments

The health departments in those cantonments are under your administration?

Gen. GORGAS. Yes.

Mr. HARRISON. You are responsible for the health conditions there?

Gen. GORGAS. Yes.

Mr. HARRISON. If there has been any lack of health conditions there, and any blame is to be attached to anyone, it would be chargeable to you, would it not?

Gen. GORGAS. Yes.

Mr. HARRISON. How has the death rate been in the cantonments, and how has the general health been?

Gen. GORGAS. The general health has been very good, with the exception of this epidemic of measles. Leaving out that epidemic of measles, our death rate would be as it was the first two months, less than three per thousand, which would be very low.

Mr. HARRISON. You think the health conditions at the cantonments are very favorable, considering the difficulties that have been confronting the men?

Gen. GORGAS. I do not think the difficulties have ever affected the death rate. That death rate of three per thousand would be about the best possible.

Mr. HARRISON. How do you provide for the nursing of the men at the cantonments?

Gen. GORGAS. We have at present with the Army in the United States as nurses 80,000 men who are brought out from the same class of men as come in with the draft. These men are in the hospitals and they do the waiting on the sick, and they known as orderlies and do all the ordinary work around the hospital. We have in these cantonments now 5,000 trained female nurses.

Our method would be this: There would be a trained female nurse on the ward, with a man as her assistant. These men are just country boys, the class of men you would get generally for that class of work; they have no special knowledge about nursing. They are gradually being whipped into shape by the medical officers and the female nurses.

Mr. HARRISON. You have had considerable difficulty, just as all the other branches of the service have, because of the large number of new men?

Gen. GORGAS. They are all new. Take, if you please, any one of the National Guard camps; such as Camp Bowie, where I was recently. The officer in charge of the hospital at that camp has 2,000 people to care for, and he has himself and his adjutant as the only trained men in that aggregation of 2,000 people. Not that the other people are below par, at all. The doctors are the best doctors in the country. They are the right men.

The men in charge of surgery and medicine there are probably better equipped men than any of us could get, if we had pneumonia, for treatment.

It is difficult in any big organization, where they have not worked together, and where they are not all thoroughly disciplined, to get things done. Those are the difficulties we are concerned with now. The situation is much better than it was four months ago, and it is

going to be very much better four months from now than it is at the present time.

But it is like the rest of the Army, they have not been trained to work together, and there would be the same difficulty in any other big project.

Mr. HARRISON. You have in these cantonments now a sufficient nursing force to take care of the sick men, and a sufficient medical force, generally?

Gen. GORGAS. We have, in general. We are increasing the female nurses, but we need more and more.

Mr. HARRISON. I have had a great many letters from pharmacists. Does your department have charge of the commissioning of pharmacists, and have you decided to commission the pharmacists?

Gen. GORGAS. Yes; and in general we have taken the ground that it was not necessary. We have very little pharmaceutical work, as compared with the English and French and Italian armies with which they compare us, because they manufacture a good many of their own drugs, and in that special knowledge is required. We buy ours, generally, through our supply department, and furnish them to the camps, and there is comparatively little dispensing. All of these dispensers in these drug stores are trained men, but they are generally noncommissioned officers.

Mr. HARRISON. Do they put up prescriptions?

Gen. GORGAS. To a limited extent; they are sufficiently trained for that.

Mr. HARRISON. How about the osteopaths?

Gen. GORGAS. I would like to use them, and perhaps can use them in the reconstruction work, for massage and things of that sort. They are pressing for commissions, too. We feel that the conditions are such that an osteopath would not be able to perform all the functions of a medical officer on the ward.

Mr. HARRISON. This appropriation takes care of the Ambulance Corps, does it not?

Gen. GORGAS. In the same way it takes care of the rest of the Medical Corps. This appropriation would buy motor ambulances for the Medical Corps. This appropriation, outside of the motor trucks, would just supply what it does for the rest of the troops—that is, such things as medicine.

Mr. HARRISON. Will this appropriation take care of the ambulances drawn by horses?

Gen. GORGAS. No; that comes under the Quartermaster's Department, both the ambulances and the animals. This appropriation would not cover that.

Mr. HARRISON. Would it not be advantageous to have all of the appropriations for that purpose under one head?

Gen. GORGAS. I am inclined to think it would be advantageous.

Col. DARNALL. I think it would be, too; but they are gradually eliminating the horse-drawn ambulance. We have three of the companies to a division now, which are motor companies, and the chances are that the other—horse-drawn ambulances—will be used very little.

Mr. NICHOLLS. They are not fast enough?

Col. DARNALL. No; and also because of the forage, and one thing and another.

Mr. TILSON. Would you not be practically obliged to have horse-drawn vehicles to accompany your foot troops? Is it not wearing on a motor vehicle to slow it down and make it travel all day at the rate of foot troops, and therefore will you not be obliged to have some horse-drawn vehicles for the troops?

Col. DARNALL. I do not know that that difficulty will be there to any great extent. The foot troops are being transported a great deal by motor trucks now.

Mr. TILSON. But where they have to be moved by marching and have to be accompanied by some kind of medical vehicle, is it not very difficult to use motor transportation for that purpose?

Col. DARNALL. Yes; that is true, but they might wait.

Mr. TILSON. They block the column if you stop them?

Col. DARNALL. Yes; but it is understood that very little horse-drawn transportation is used except where the vehicle has to go out to the actual front. That is where we intend to use ours.

Gen. GORGAS. Maj. Dewey has one other point he would like to bring out in connection with the gas masks, Mr. Chairman.

Maj. DEWEY. I think there is one point in connection with gas masks that may interest you. As long as gas is used in modern warfare on the scale it is now used there will always be some death casualties, and this country will gradually have to come to a realization that we are going to have gas casualties right along. They come as a result of surprise attacks as much as from anything else. Surprise attacks have been launched on such a scale that Stokes mortars and things of that kind have been fired in such perfect unison that 15 tons of gas have been in the air at one time over a few hundred yards of front. When that falls into the trenches there are going to be a lot of men who get excited and who do not get their gas masks on in time. It is interesting to note that the Germans figure that in a gas attack such as I speak of they must have at least 10 per cent of casualties. The British have nothing like that number. They are better protected than the Germans, but even then they have a few, and we must realize that we will have some. The country must realize that every gas casualty does not mean that a gas mask has failed to function.

Mr. HARRISON. Do you find any difficulty in getting all the medical assistance you need?

Gen. GORGAS. The doctors, do you mean?

Mr. HARRISON. Yes.

Gen. GORGAS. It has been a tremendous job to get what we have—16,000 men. We have all we need at present, and I think we will be able to meet the demands made upon us with the assistance of the various medical associations, who have helped us in every way possible.

Mr. HARRISON. And the same thing applies to nurses?

Gen. GORGAS. Yes.

Mr. HARRISON. Does the Red Cross operate with you in any way?

Gen. GORGAS. Yes; the Red Cross has helped us a great deal.

The CHAIRMAN. In connection with the question of commissioning pharmacists and osteopaths, it has been urged upon me that commissions ought to be issued to members of the Nurse Corps. What do you think about that?

Gen. GORGAS. We have a clause inserted in our regulations, corresponding with the British regulations, that gives the nursing corps a position just after the cadets. I believe that answers all present purposes.

The CHAIRMAN. Just after the cadets?

Gen. GORGAS. Yes; in their relative rank and standing.

The CHAIRMAN. I do not understand that.

Gen. GORGAS. I mean the cadets at the Military Academy, who are not commissioned officers.

The CHAIRMAN. You mean the cadets at West Point?

Gen. GORGAS. Yes.

Mr. KAHN. We also have cadets in various branches of the service. For instance, in the aviation section of the Signal Corps the men who are at the schools learning to fly are called cadets. Would these nurses come after those cadets, do you think?

Gen. GORGAS. As I understand it, they have the same position as the cadets at the Military Academy.

Mr. KAHN. These cadets are not graduates of the Military Academy, nor are they attendants there. Some of them are at the aviation school at Atlanta, Ga., and some of them are at other fields, and I understand that in the Ordnance Department they have a grade known as cadets, who are learning to adapt themselves to the particular business of that department. Would the nurses come after those cadets?

Gen. GORGAS. My understanding is that those cadets would have the same rating as the cadets at the Military Academy. I am not sure about that.

Mr. KAHN. Will you get that definite information and put it in the hearings?

Gen. GORGAS. Yes; I will do that.

NOTE.—It is understood that the rank of a nurse is above a sergeant major and below a second lieutenant.

The CHAIRMAN. The argument is that they would have more influence and be better able to enforce discipline if they were commissioned.

Gen. GORGAS. I have so far been opposed to that, Mr. Chairman. I think we are getting along well enough. It is only in the Canadian Army that nurses are commissioned; not in the British Army.

The CHAIRMAN. You are perfectly satisfied with the organization as it is now?

Gen. GORGAS. Yes. Mr. Chairman, Col. Darnall has something to add in reference to ambulances.

[Extract from Regulations for the British Army Medical Services.]

DISCIPLINE AND DUTIES.

As regards medical and sanitary matters and work in connection with the sick, the matrons, sisters, and staff nurses are to be regarded as having authority in and about military hospitals next after the officers of the Royal Army Medical Corps, and are at all times to be obeyed accordingly and to receive the respect due to their position. (Paragraph 324.)

Col. DARNALL. The question in regard to horse-drawn ambulances was thrashed out a year or so ago. There is a difficulty in our furnishing the horse-drawn ambulances, because the animals' forage is included with that. As a matter of fact, the Medical Department

does not desire to furnish the horse-drawn ambulances. Everything comes in so nicely as it is now, so far as the Quartermaster's Department is concerned, that we would prefer to remain that way. We are having no difficulty with it arranged in that way.

Mr. LUNN. If there was any difficulty in getting the ambulance to the proper place, you would not be responsible?

Col. DARNALL. No. We think it is working nicely the way it is.

The CHAIRMAN. Have you a standardized ambulance now?

Col. DARNALL. We have a standardized motor ambulance.

Mr. GORDON. You stated that your estimates were based upon the number sent back from France by the Canadians since the beginning of this war, and that it is a fixed percentage of 10 per cent. Is it the judgment of our military authorities that the casualties will be as great in proportion for the remainder of this war as they have been since the beginning of it?

Gen. GORGAS. I could not speak for them. Our estimates were in general terms. We thought the Canadian Army was made up much as ours was made up, and therefore, just for the purpose of making an estimate, we thought it would be a fair guide for us. It was not quite 10 per cent, but a little bit over 9 per cent.

Mr. GORDON. You say you estimated that for the men at the front or for the men in the field. Is there not a distinction between those terms, the men at the front and the men in the field?

Gen. GORGAS. Yes; but that refers to the men in France.

Mr. GORDON. All the men in France?

Gen. GORGAS. In the field army.

Mr. GORDON. General, in reference to this bill, 5407, which provides that osteopathic physicians shall be admitted to examine patients, the members of this committee are receiving a great many letters importuning them to favor the passage of that bill. You gave a formal opinion to the chairman of this committee last July in reference to that subject. Are you still satisfied with that opinion?

Gen. GORGAS. Yes.

Mr. GORDON. Would you have any objection to that being placed in the record for the information of the committee?

Gen. GORGAS. That is still my opinion, and I would not have any objection to that going into the record.

(The opinion referred to is as follows):

(Second indorsement.)

WAR DEPARTMENT, SURGEON GENERAL'S OFFICE,
July 26, 1917.

To: The Adjutant General, United States Army.

1. Returned. The following resolution, unanimously adopted by the general medical board of the Council of National Defense, embodies the principles and methods now adopted for the admission of members to the Medical Corps of the Army, and I am of the opinion that no change should be made in this regard:

"It is the sense of the general medical board of the Council of National Defense that candidates for commission in the Medical Corps or in the Medical Reserve Corps of the Army and the Navy shall be graduates of reputable schools of medicine, and shall be required to pass the examinations—mental, moral, and physical—now required by law and regulation, without exclusive adherence to any particular school of doctrine or practice."

2. It will be observed that the foregoing qualifications include three requirements, each of which I believe to be essential:

(a) Evidence of time spent in securing a good medical education and training. Ability to pass an examination can not take the place of this education and training,

which are now secured by graduation from a reputable school of medicine, legally authorized to confer the degree of doctor of medicine. Impartial investigations of colleges of osteopathy do not indicate that they furnish to their students adequate opportunities for that scientific study of the human body, in health and in disease, which should be the basis for the intelligent treatment of disease and injury and for the preservation of health.

(b) While examinations are not a substitute for actual training, they are an added test of fitness and should remain as now required by law and regulations. No one, however, should be regarded as eligible to enter the examinations who has not spent the time required and pursued the scientific and practical studies required for graduation from a reputable school of medicine authorized to confer the medical degree.

(c) The time has long passed for exclusive adherence to any particular school of medical doctrine or practice, such as is implied by the degree of doctor of osteopathy, or chiropractic, of naturopathy, of mechano-therapy, of eclectic medicine, or any other "pathy." the terms "allopathy," "old school," etc., are equally objectionable. A scientifically educated physician is at liberty, and it is his duty to employ any method of treatment whatever which he believes will benefit his patient. Homeopathic physicians have the degree of doctor of medicine, and some of their schools furnish an adequate medical education. They have for the most part abandoned their exclusive dogmas; as a class they are rapidly declining in numbers and are being merged in the general profession of medicine. They are eligible to qualify for the Medical Corps of the Army.

While practice based upon the peculiar tenets of osteopathy may be beneficial in suitable cases, the same or similar methods are open to the use of any physician. Osteopathic procedures applied to cases unsuited for them, as has often been done, result in serious harm. The only safeguard against such adherence to exclusive systems is a good medical education, such as is now demanded for admission to the Medical Corps.

3. It would be most objectionable to recognize any sect of medical practitioners in the Medical Department of the Army, be it osteopathic, allopathic, eclectic, chiropractic, or any other of the countless sects. Members of the regular profession of medicine, who now enter the Medical Corps, are merely educated physicians and do not constitute a sect in medicine, allopathic or otherwise. They are merely physicians free to follow any method of treatment which they may deem beneficial, in the same sense that a chemist is a chemist and a physician is a physician.

It is argued that osteopathic physicians are trained in the principles of scientific medicine and are as well qualified as any physician to practice all branches of the profession. I have already indicated that in my judgment this is not true, but, if it were conceded, then the epithet "osteopathic" which sets these practitioners apart as a separate class or sect, could have no significance or value other than a commercial one, and this is not a principle which should be sanctioned in the constitution of the Medical Corps of the Army.

4. It is hardly necessary to say that the creation of a Dental Corps and of a Veterinary Corps in the Medical Department of the Army offers no parallel for the creation of a corps of osteopaths or for their admission as such to the Medical Corps. The former are divisions of medical science and practice, properly recognized as such. Whatever argument can be urged for the admission of osteopaths would apply equally to chiropractics and other medical sects. All cure their patients in certain cases; all do more harm than good when the balance between benefit and injury is struck.

5. The Judge Advocate General has advised the Secretary of War to the effect that, while the law does not specifically provide that a physician, in order to enter the Medical Corps, must be a doctor of medicine, unwritten practice does, and the Secretary has decided in accordance with this opinion that he will require that a man coming into the Medical Corps shall have the degree of M. D.

I hope that this decision, which is in accord with all previous practice, will be maintained, and that the degree of D. O. will not be recognized as an equivalent, as is desired by the osteopathic physicians.

6. The admission of osteopathic physicians as such and without the degree of doctor of medicine to the Medical Corps would have the practically unanimous opposition of the medical profession of this country and of all allied countries, would be regarded, and justly so, as lowering the standards, educational and professional, of our Medical Corps, and would have a discouraging and detrimental effect upon efforts to secure physicians for the corps both now and in the future, and upon the general morale of the corps.

7. For the reasons above set forth I recommend to the Secretary of War that he strongly oppose this bill.

W. C. GORGAS,
Surgeon General United States Army.

Mr. McKENZIE. Going back to the matter of gas masks, Maj. Dewey, you have stated that you had manufactured something like 25,000, 20,000 of which were sent to France, and afterwards returned, because they were rejected by Gen. Pershing as not being the right kind of masks to be used, and they were returned to this country, and upon the return of those masks, you began the manufacture of a different character of gas mask, and stated that you are now furnishing those to the Army.

The question I want to ask is whether or not, after Gen. Pershing had vetoed the issuing of the gas masks shipped over to the other side, you submitted to him for his approval the gas mask you are now manufacturing and having sent over there?

Maj. DEWEY. Let me correct one misunderstanding you have. We asked for the return of those masks ourselves. We were fully conversant with the two defects before those masks arrived in France. The type of mask was exactly what Gen. Pershing had asked for, and the two main defects were in the chemicals, which would not take out one gas, and in the face piece, which would not stop the penetration of that same gas through it. The correction of those two main points made that mask the equal of the British mask. It so happened that in correcting those defects we made a better chemical, and we have now better protection than the British.

Mr. McKENZIE. The point I am trying to bring out is this: If Gen. Pershing has arbitrary power to reject any sort of equipment furnished him by you for the use of the soldiers, it seems a matter of good policy, at least, before you order thousands of those gas masks made to submit the matter to him for his approval. It seems to me that would be advisable.

Maj. DEWEY. We did submit samples; we submitted the first samples we made. Unfortunately, transportation conditions are such that we do not know whether they have arrived in France. We have a cablegram asking for the shipping of the masks, but we have no way of knowing whether the samples have arrived. They were turned over to the transportation end of the Army and were then out of our power.

Mr. McKENZIE. We are interested in knowing, first, whether you have a good mask, which you seem to have, and second, before expending the money in having it manufactured, whether it is going to be accepted by the commander in chief of the troops in France or whether it is going to be rejected.

Maj. DEWEY. I can only say that Gen. Pershing has passed upon the type as being what he wants, and that the entire design is satisfactory to him, and we have with us, sitting in our office, the British experts who advised Gen. Pershing at the time he accepted the type, and who are probably as well equipped to tell us whether a gas mask is satisfactory as are any men in Europe.

Mr. McKENZIE. One of the reasons I had for asking these questions is because we have been repeatedly told that Gen. Pershing did not want this or that, or that he called for this or that, and what we would like to know before we appropriate the money is whether the War Department, or the staff officers in the War Department, have anything to say about this, or whether Gen. Pershing is the only man whose opinion we must have before we proceed to manufac-

ture anything. If that is the situation, then this committee ought to be advised as to what he wants before appropriating the money to manufacture the article, in order to protect the Treasury to some extent.

I would like to ask Gen. Gorgas one or two questions. This item in the bill provides for, or at least it mentions, hospital ships, and under this item an appropriation could be made for hospital ships. I understood you to say you had not taken any decided steps along the line of constructing hospital ships.

Gen. GORGAS. It has not yet been determined.

Mr. McKENZIE. I want to ask you whether or not you have any information as to whether any nation in the world carries in its fleet, or keeps in its fleet, specially constructed hospital ships for the Army.

Gen. GORGAS. All the nations who have transportation to-day now have done so. The English are still using their hospital ships, but they are armed and not painted as hospital ships. They have practically given up any idea of protection of hospital ships. They use them as transports.

Mr. McKENZIE. Are they used exclusively as hospital ships, or are they ships that have been converted for the time being, to be used in that way?

Gen. GORGAS. I think they are all converted.

Mr. McKENZIE. But they were not constructed originally for the specific purpose of transporting the sick and wounded soldiers?

Gen. GORGAS. Some were until the enemy disregarded the rules of the Geneva Convention relating to hospital ships. I can look that matter up and put more definite information in regard to it in the record.

Mr. McKENZIE. My reason for asking those questions is that I have heard our Government criticized because we have not constructed some hospital ships. I want to ask you this question, whether one of the great ocean liners, one of the great passenger ships that we have under our flag, would make a suitable ship for that purpose, or could it be made a suitable ship for conveying back to the United States our sick and wounded soldiers?

Gen. GORGAS. I think that would be the best kind of a ship.

Mr. McKENZIE. It struck me that way, that with, perhaps, very little expense, one of those great ocean liners could be made into a very good hospital ship. If there is any real ground for criticism I want to know it, and I think you ought to be the man who would be able to state whether or not we will be in a position to take care of the wounded soldiers and bring them back in the comfort to which they are entitled. What have you to say about that?

Gen. GORGAS. I think it is a matter that could be very well taken care of by ourselves now. I do not believe it is necessary to build special hospital ships, but we ought to prepare now, and the question ought to be determined.

What I am asking for now is to determine whether we ourselves or the Navy are to transport these sick and wounded men. If it is determined that the Army is to do that, I would at once raise the question as to whether we would have special hospital ships, or whether we would do as the English are doing now.

If it should be decided to build special hospital ships and try to get the protection of the Geneva Cross, we should prepare some of those ships. If we are not going to have protection for the hospital ships in that way, I think we could use transports in returning these men. There would not be very many of them to come back. The men who would be sent back on those ships would not be in very serious condition, and I think one of the transports would be as comfortable as anything we could get.

Mr. McKENZIE. I understand you have already commissioned 5,000 men in the Dental Corps, and that is a sufficient number to take care of an army of 5,000,000 men, and that for the time being the door is closed to any man obtaining a commission in the Dental Reserve Corps. If I understand you correctly, that is also practically true in the case of the Medical Reserve Corps, for the time being.

Gen. GORGAS. In the case of the Dental Reserve Corps, what you state is just the condition that exists. We think we have all we want, and we have stopped taking men in. In the Medical Corps, we have a very small margin, and we are still taking into the Medical Reserve Corps all the men we can get. We want a larger margin in the Medical Reserve Corps.

Mr. McKENZIE. You have as many in the active service as you want?

Gen. GORGAS. We have as many as we want.

Mr. McKENZIE. You feel you have a sufficient number, so that the health of the soldiers will be carefully guarded and protected?

Gen. GORGAS. As far as the medical service is concerned, yes.

Mr. McKENZIE. You have complied with the law in the appointment of seven surgeons to a thousand men, as we gave you authority to do?

Gen. GORGAS. I wish you had given us that authority, but you did not do that. If you study the law carefully you will see that it applies to the Regular Army, and if you would arrange it so that it would apply to the National Army, as some bills which have been introduced provide, I think it would be desirable.

Mr. McKENZIE. As a matter of fact, have you not assumed that you had a right to do that, and have commissioned those men according to that?

Gen. GORGAS. The law for the Reserve Corps does not limit me at all. I am just limited by the amount of the appropriation, and so far I have had all I wanted.

Mr. McKENZIE. These incidents which have occurred, and which have been mentioned here this morning, meet with your disapprobation, and are due to the fact that in commissioning those men on their Army record, or on such information as you were able to get at the time, naturally it was inevitable that occasionally you would get, perhaps, what we might designate as an inhuman brute who would get a commission and who would abuse the sick men, and thus reflect upon the whole Army of the United States, as these men who have been referred to did. So far as you are concerned, you are in favor of punishing those men to the full extent of the law?

Gen. GORGAS. You speak of the two men referred to in the newspaper article?

Mr. McKENZIE. Yes, sir.

Gen. GORGAS. They have been convicted by a court martial; I think I would accept it that the facts stated are so.

Mr. SHALLENBERGER. I have here a statement from the New York Times, which you apparently gave out to the public press, giving the average of sick soldiers in our Army for the four months beginning the 21st of September and extending to the 18th of January, and the average as given in that article is 8.2.

Gen. GORGAS. Was not that the death rate?

Mr. SHALLENBERGER. Yes; how does that compare with the death rate you had in the border trouble, among the troops we had on the border at that time?

Gen. GORGAS. In that same table you will find that under the head of the death rate for 1916. I can put that in the record.

Mr. SHALLENBERGER. This death rate is for four months; is that not true?

Gen. GORGAS. That figure of 8.2 means that if twice the number of men should die in the next eight months who have died in the last four months, the death rate would be 8.2.

Mr. SHALLENBERGER. It would be 8.2 for the year?

Gen. GORGAS. Yes.

Mr. SHALLENBERGER. Does that mean if the same death rate were continued, the death rate would be 25 to the thousand instead of 8.2 to the thousand?

Gen. GORGAS. Only 8.2 to the thousand.

Mr. SHALLENBERGER. I ask that question because I have here the report of Maj. Seaman upon the death rate from sickness and disease in the Japanese army, and it was practically 20 per thousand.

Gen. GORGAS. That must include the killed.

Mr. SHALLENBERGER. No, that is the rate from sickness and disease alone.

Gen. GORGAS. What time was that?

Mr. SHALLENBERGER. That was for the entire war.

Gen. GORGAS. That would be an enormous death rate.

Mr. SHALLENBERGER. That was 20 per thousand, or 2 per cent.

Gen. GORGAS: I think that must be a mistake.

Mr. SHALLENBERGER. He says: "Those who died of disease, exclusive of infection and contagious diseases, amounted to 1.24 per cent of the entire army in the field, and those who died of contagious diseases amounted to 0.76. Therefore the entire deaths from all diseases amounted to exactly 2 per cent of the army in the field, a rate of 20 per thousand of strength. On a basis of an army of 600,000 this would mean that only 12,000 men died of disease." He gives a table of percentages, as follows:

	Per cent.
Killed in action.....	7.32
Died of wounds received in action.....	1.51
Wounded in action.....	24.27
Other wounded (accidents, etc.) and sick.....	27.11
Died from disease (not including infectious and contagious diseases).....	1.24
Contagious diseases.....	1.93
Died of infectious and contagious diseases.....	.76
Number never wounded or sick during war.....	35.86
Total.....	100

I think that is much better than any other army ever did. He says that no other army was ever able to go through a war with a death rate of 20 per thousand.

Gen. GORGAS. Our death rate in Cuba was only 20 per thousand.

Mr. SHALLENBERGER. I have had officers tell me that the death rate of our soldiers during the Spanish-American War, from some statement given out by the Medical Department of the Army, was only 2 in a thousand. They must have meant 2 to a hundred.

Gen. GORGAS. It was 2 per cent.

Mr. SHALLENBERGER. I wanted to be sure about that. I think that is what must have been meant.

Gen. GORGAS. I recollect the figures.

Mr. SHALLENBERGER. The statement has been made on the floor of the House, and it was said that from the reports of the surgeons, it was only 2 to the thousand. I can not find that any army was ever able to go through war conditions and have as small an average rate as you are showing now. In other words, you are beating the Japanese record by two and one-half to one. Maj. Seaman says that the Japanese record is better than any army ever showed before. It seems to me, with the health condition of our Army as you say it is now, you are making a very creditable showing. Of course, the men have not yet been in the field.

Now, I would like to ask you another thing. I notice that the decrease in the venereal diseases is very marked, the longer you have the men in the camp.

I have a report prepared from data in your office, which shows that the disease was very much heavier in September than it was in October, and that it has decreased until it is now only 80 per cent of what it was in September, showing that you have had a very marked decrease in venereal diseases.

I also see that the Regular Army only shows a rate of 80 to 1,000, whereas in the National Army encampment it was 388 in September. As I say, that report shows that so far as the Regular Army is concerned, the rate was only 80 to 1,000, and the National Army was 162 to 1,000, suffering from venereal diseases. Have you any record which would enable you to give us any reason why the rate of venereal diseases in the National Army, and also the rate of sickness caused by other diseases is so much greater than in the Regular Army and in the National Guard, especially in the case of venereal diseases?

Gen. GORGAS. I do not think of any particular reason. Of course, the period you are referring to would make some difference. Just after the men come into the camp the rate is much higher than it is after they have been there for some time.

Mr. SHALLENBERGER. Do you take a man into the Army who is suffering from venereal disease?

Gen. GORGAS. Yes.

Mr. SHALLENBERGER. Has that always been done?

Gen. GORGAS. I think so.

Mr. SHALLENBERGER. There have been men who have gotten pensions or who have applied for pensions who have been rejected because they were dismissed from the service on account of having had venereal disease and thus became incapacitated for service. Do you not run that risk?

Gen. GORGAS. You are referring to syphilis?

Mr. SHALLENBERGER. You do not take them if they have that, do you?

Gen. GORGAS. Yes; but it would depend upon the condition they were in, upon the stage of the syphilis.

Mr. SHALLENBERGER. Is there not danger of contagion?

Gen. GORGAS. They are not allowed to go among the other men.

Mr. SHALLENBERGER. But you would not take a man into the Army if he had any other contagious disease? You would not take him if he had measles?

Gen. GORGAS. We would put him in an isolation camp. It would be poor policy not to take a man if he is going to get well of the disease he has.

Mr. SHALLENBERGER. Do you put the men suffering from venereal diseases in observation camps?

Gen. GORGAS. They are sent to the hospital and treated.

Mr. SHALLENBERGER. I want to ask if it is not a fair assumption, since you have made such a tremendous improvement in regard to venereal diseases during the last year, and in view of the fact that you will have these men in the camps from now on—if we have the right to assume that the death rate from sickness will not increase, but will probably decrease from now on? Is that not to be expected in the case of the men in the camps?

Gen. GORGAS. I think that will certainly happen. In September and October, before the epidemic of measles broke out, we had a low rate. It was between two and three per thousand. I feel very sure that as soon as we get over the effects of the epidemic, within two or three months from now, our rate will return to that figure. We are suffering now from epidemics.

Mr. SHALLENBERGER. You have not got the record of the number of deaths in the Army during the time the men were on the border, have you?

Gen. GORGAS. That would practically be the record for the year 1916.

Mr. SHALLENBERGER. Will you put that in the record?

Gen. GORGAS. Yes.

(The matter referred to is as follows:)

Number of deaths in 1916 among the Army, either in Mexico or at the border:	
Disease.....	189
Injury.....	187
Total.....	376

Mr. SHALLENBERGER. I was interested in what Mr. McKenzie said about the trouble you had with officers who would not treat the men properly.

I have read the Articles of War, and I find that if a private soldier commits violence against an officer, or if he strikes him, the punishment for that offense is such punishment as the court-martial shall direct, even including death. Have you ever tried shooting medical officers for neglecting their men? Have medical officers ever been executed for such things as that?

Gen. GORGAS. I do not know. I could not say yes or no to that question.

Mr. SHALLENBERGER. Do you not think it would be a good thing if a few officers were shot, where it was shown that a man had brutally and intentionally neglected his men? I know if a private soldier were to neglect his duty he would be severely punished. If I am a private soldier on a picket line and neglect my post, and come in because my feet get cold, I may be shot for that, and sometimes men have been shot for that. If a medical officer neglects his men, in my judgment he should have dealt out to him the same penalty as any other soldier, but I wondered if that had ever been tried.

I am a great believer in the theory that punishment effects certain reforms. I have read in the newspapers that there were over 300 killings in Chicago last year. In the city of London, with three times the population of Chicago, there were only 17 killings during the same times, and 15 of the guilty persons were executed within six weeks of the time the murder was committed, whereas in Chicago a good many of the guilty persons escaped.

The point is that apparently the knowledge that punishment is going to be severely inflicted has a meritorious effect, and I wondered if that sort of punishment meted out to officers in the Medical Department who neglected their men would not have a good effect.

Gen. GORGAS. The medical officer is subject to the same articles of war as every other soldier.

Mr. SHALLENBERGER. Yes; but there seems to be an opinion among a good many people that an officer escapes with dismissal, whereas the private is severely punished.

Gen. GORGAS. I think that in a case of that kind the officer would get a more severe punishment.

Mr. SHALLENBERGER. Is there anything in the larger death rate—in your figures you give the death rate among the Regulars as only 4.71, whereas in the National Guard it was 10.4, or two and a half times greater in the National Guard than in the Regular Army. Can you give us any reason for that?

Gen. GORGAS. Pneumonia and measles are almost entirely among the National Guard camps, for the reason I have already given you. There, again, the men had not been exposed to measles. The Regular Army has been filled principally by volunteers, and as a general thing the volunteer is more apt to come from a city or a town than from the country districts. I think that is the principal reason.

Mr. SHALLENBERGER. The Regular Army has practically had as many new men as the National Guard has?

Gen. GORGAS. Yes.

Mr. SHALLENBERGER. So that the proportion of green men coming in does not affect that so much as the place from which they come?

Gen. GORGAS. Yes.

Mr. SHALLENBERGER. You do not think there is any connection between the care given the men in the Regular Army and those in the National Guard? You do not think that is due to the better care given the men in the Regular Army?

Gen. GORGAS. No; I do not think the care given the men has much relation to the men getting measles.

Mr. SHALLENBERGER. But the care a man gets after he has the measles determines whether he will live or die?

Gen. GORGAS. Our case rate for pneumonia has not been large—that is, the number of deaths per 100 cases.

Mr. SHALLENBERGER. But that is so small in the Regular Army that there must be some vital reason for it.

Gen. GORGAS. The great reason is that they have not had to stop an epidemic of measles in the Regular Army.

Mr. SHALLENBERGER. Does pneumonia frequently follow measles?

Gen. GORGAS. Yes.

Mr. SHALLENBERGER. In camps where you had no measles, you had no pneumonia?

Gen. GORGAS. That is practically true.

Mr. SHALLENBERGER. Have you had cases of meningitis in the Regular Army?

Gen. GORGAS. I do not think there is any Regular Army camp that has been largely affected, but all of our camps have had some.

Mr. SHALLENBERGER. Is there anything in the story I have heard that the men who are drafted, believing that they would be dismissed from the Army if they contracted venereal diseases, have therefore deliberately gone out and contracted venereal diseases with the idea of being discharged from the Army?

Gen. GORGAS. I have heard that, but I have no evidence of it.

Mr. SHALLENBERGER. The fact that you take those men would preclude that?

Gen. GORGAS. They did not know that they were going to be taken in.

Mr. SHALLENBERGER. It is believed that there were a great many men drafted who did not want to go to the other side, and who tried in one way or another to avoid service, and I was told the reason for the tremendous number of men suffering from venereal diseases during the first month or two was on account of that fact, and then it materially decreased. I believe almost one-fourth of the men in the National Army had venereal diseases.

Gen. GORGAS. I think not.

Mr. SHALLENBERGER. The report shows 388 in a thousand.

Gen. GORGAS. That means——

Mr. SHALLENBERGER (interposing) That is more than 25 per cent, is it not?

Gen. GORGAS. That means if the same rate were to continue for a year, in the course of a year 388 men in a thousand would be on the sick list.

Mr. SHALLENBERGER. The report shows that on September 28 there were 388 men to the thousand in the National Army who had some sort of venereal disease; in other words, as I understand it, from the number you had there would have been 388 in every thousand if it had been kept up for a year? That is your explanation of it?

Gen. GORGAS. Yes.

Mr. SHALLENBERGER. You did not have that many to start with?

Gen. GORGAS. Those rates are all yearly rates.

Mr. TILSON. What do you multiply that by; by the number of days or months or weeks?

Gen. GORGAS. You would take the average strength of the command as given at the end of the year, and add together all the cases

of venereal diseases that had occurred in that command, and divide the one into the other.

I would like to state, Mr. Chairman, in reference to the nurses, that you have a bill before you which has already been introduced, fixing the number in the Nursing Corps and slightly adding to their present allowances.

Mr. SHALLENBERGER. Do you take officers into the Army who are afflicted with venereal diseases?

Gen. GORGAS. Yes.

Mr. SHALLENBERGER. They come in too?

Gen. GORGAS. Yes.

Mr. LUNN. You have to have letters of recommendation as to their moral character, do you not?

Gen. GORGAS. Every officer has to have those.

Mr. LUNN. He would not need to have an extra letter as to whether or not he had a venereal disease?

Gen. GORGAS. He would have a letter from the surgeon.

Col. Darnall has an additional statement he would like to make, Mr. Chairman, if you have no objection.

The CHAIRMAN. He may make such statement as he desires.

Col. DARNALL. In regard to the ships, we do not want to buy hospital ships; the appropriation is in reference to supplies for the hospital ships. There seems to be a misunderstanding in regard to that. This estimate does not cover the purchase of hospital ships, but the purchase of supplies for outfitting hospital ships.

Mr. GREENE. Are we to understand from what you said, General, that if we decide to have hospital ships it would practically amount to some rearrangement of the interior of the ships along general lines of material difference from the transports, and you may need some interior rearrangement for that purpose?

Gen. GORGAS. These men who would come over in those ships would be men who are walking around, and who would be just brought back home for care and discharge, and I think they could be accommodated as much as the troops would be. We would have to have a little bigger hospital space.

Mr. GREENE. It would not be a matter that would delay the preparation of the ship very long?

Gen. GORGAS. No; but the men are beginning to come back, and it ought to be settled very soon.

Mr. GREENE. I mean as far as the reconstruction is concerned.

Gen. GORGAS. No.

The CHAIRMAN. Did I understand you to say that this item on page 54, "Medical and Hospital Department," does not include the purchase of ships?

Col. DARNALL. No.

The CHAIRMAN. Is there any item in the bill that would expressly include that?

Col. DARNALL. There is nothing here. It says "Hospital ships and transports"; that does not mean the purchase of them, it means the medical equipment and supplies.

The CHAIRMAN. It says "The purchase and exchange of typewriting machines for military posts, camps, hospitals, hospital ships, and transports." That just means the purchase of supplies?

Col. DARNALL. Yes; I think it is very clear on that.

Gen. GORGAS. It includes the purchase of any medical supplies we need.

The CHAIRMAN. There does not seem to be any item in the bill expressly providing for the purchase or reconstruction of hospital ships?

Gen. GORGAS. No.

Mr. SHALLENBERGER. General, there have been a good many statements made about the conditions of the Army. This record shows that the number of cases per thousand on September 28 was 388. It also shows that on December 7 you had reduced that to 80, a reduction of over 400 per cent. In other words you worked a tremendous improvement in the physical condition of the men in a very short time. Therefore, the Army, instead of being in bad shape, and instead of being a bad place for these men, so far as that is concerned, is proven by this record to have been a tremendous reformatory institution since you took those men in. They did not contract those diseases when they came into the camps?

Gen. GORGAS. No.

Mr. SHALLENBERGER. You have tremendously improved the condition of the men in that respect as well as in others?

Gen. GORGAS. I think so.

Mr. SHALLENBERGER. I think that should be in the record, that while there were seemingly a great many men so afflicted, and some people might get the idea that that is a bad showing, as a matter of fact the record shows that you very quickly remedied that condition.

Gen. GORGAS. They came in probably with the disease.

Mr. QUIN. General, how do you get the doctors for the Army? I think there has been a wholesale, unjust criticism of your department because of the brutal action of a few men.

Gen. GORGAS. We get the medical officers—we have in the Regular Army a certain number of medical officers, and we have the necessary machinery for getting them through examinations. Then we got the medical officers who came to us with the National Guard, but the bulk of our medical officers are those we get through our Reserve Corps. They are all subject to examination.

I am inclined to think that as far as the personnel of our medical service is concerned, it is by far better than that with which any other army went into the field.

Mr. QUIN. So far as the National Army is concerned, taking my own district as an example, every doctor who had been called has had my recommendation, and I presume he has also had the recommendation of the United States Senators. Do you require that of all doctors who are taken in from all parts of the United States?

Gen. GORGAS. No, it is not required. The method of getting them—take the Reserve Corps, in which we have now about 16,000 men, which make up the bulk of our Medical Corps.

The doctor makes his application to our office, and we send him blanks which refer him to his State board, generally. When he sends his application in, he also sends along with it a certain number of credentials. Of course, if he has credentials from Senators and Representatives, they have great weight, and probably most of the men have tried to get credentials of that kind.

Then he goes to his State examining board. We have several of them in most of the States, appointed from men who are working

there. They examine him physically and mentally, and they go into his credentials. The State boards are generally made up of well-known practitioners in the State, who have a general knowledge of the profession in the locality where they operate.

Mr. QUIN. Here is the proposition: My observation is that the medical profession, as a rule, are most humane and kind hearted people. But I can conceive of a man being addicted to some drug habit that would cause him to lose that feeling. Have you any way of passing on the moral qualifications of the doctors you take in the Army?

Gen. GORGAS. The credentials he has help to give us some idea in reference to that. The local board generally knows the personnel in the particular district where it is located. We depend mostly upon the records of our big medical associations, such as the American Medical Association, for information of that kind. Ordinarily, they will have the record of any particular doctor for a number of years. They would know his history with regard to drug habits, and whether he had been convicted of anything disreputable, or had been accused of anything disreputable.

Mr. QUIN. In reference to the isolated cases that occur, and concerning which your department and the whole War Department are unmercifully criticized, have you any way of knowing what those charges are?

Gen. GORGAS. You refer to these two men who have been tried?

Mr. QUIN. No; not especially to those two. I am referring to the cases which were referred to in the speech made in the Senate the other day.

Gen. GORGAS. No. I have written to Senator Chamberlain on that subject. The only way we can get the data in reference to those cases is for him to give me the name of the man to whom he was referring, and then I can send an inspector to that particular camp and get the facts in that particular case.

Mr. QUIN. In your own observation and experience, there is not one doctor in a thousand who would be guilty of any such conduct as that, is there?

Gen. GORGAS. We have several hundred cases that have been investigated. We have a great many letters of complaint. I do not recollect anywhere the facts are exactly as they are stated. The picture is different. I would be glad to mention some prominent ones which have occurred recently, where the picture is so radically different from the real facts, even though the case may be reported in perfectly good faith.

Mr. QUIN. I think that would be valuable information for the committee.

Gen. GORGAS. There was a case in one of the camps about which the governor of the State wrote to me. I was a personal friend of the governor and he wrote to me and stated that the health officer of the State had been in this camp and found that the pneumonia cases had no attention and found that those men never had their faces and hands washed and that there was no nurse to look after them. The picture he painted was a good deal like that which was set forth in the letter which Senator Chamberlain read to the Senate. I went down there in person and went to see the health officer, and I got

the detailed facts as they were set forth by the health officer, and the name of the man and the ward in which he was located, and I went right up to the camp and went into the ward where he said that man was. It was a good deal as the health officer had said. The man was in a ward of convalescent measles cases. It was a camp battalion in one of these crowded hospitals. The man was sick of pneumonia, but he was not a seriously sick man. The rest of the ward was filled with convalescent measles cases, and those men looked after themselves.

There were two orderlies on duty in the ward and they waited on anybody who needed waiting on.

This particular man had been looked after in a rough sort of way by these two untrained orderlies.

The whole hospital was inspected by the commanding officer and the doctor in charge of the ward.

I then went to look at the pneumonia cases. There were 300 in the hospital. They had been all concentrated into a dozen wards and they were under the care of a hundred or more female nurses.

I said to the head nurse, "What is your routine with regard to your pneumonia cases?" She said, "Every pneumonia case in this hospital has had his face and hands washed three times every day since he has been here. He has been fully bathed once a day. He has always had a female nurse, there being from two to four on duty in the ward." I said, "Here is a pneumonia case that has had no female nurse over him." They had overlooked that case, in the confusion of a small hospital greatly overcrowded. If he had been seriously sick he would not have gone to the convalescent ward. Out of three hundred cases of pneumonia there one had not been looked after by the female nurses.

Of course, it was wrong that a pneumonia case should have gotten in the convalescent measles ward, and four months from now a thing like that will not occur. It was an isolated case, and did not give a true picture of the pneumonia conditions in that camp. The idea of the governor and the health officer of the State was that all cases of pneumonia were treated in the way in which that one case which the health officer reported about was treated.

Personally, when I can get the names from Senator Chamberlain, I will investigate the case he referred to, but I think it will be found that there was some such condition as that. I know the camp he was referring to, and I was in that camp about the time this case is supposed to have occurred.

The CHAIRMAN. A newspaper clipping just handed to me in reference to that case says that it occurred at Camp Donaiphan, and it says that the name of that man was Albert Hestwood. It says he was a member of a Kansas organization and a son of Rev. C. D. Hestwood, a Methodist minister of Liberty, Kans.

Gen. GORGAS. That will be sufficient for me to act on. We can send to the camp, and we can locate the trouble.

Mr. QUIN. If a doctor is guilty of that kind of conduct, what would be the punishment meted out to him by your department?

Gen. GORGAS. Of course, Senator Chamberlain does not accuse the doctor of doing anything. I can take the other case, where a doctor has been convicted of letting a pneumonia patient go back to the ambulance because he did not salute him. That is what the charge

was, as I read it in the newspapers. The newspaper stated that the doctor had been dismissed, and that the Secretary of War had sent the proceedings back to the court-martial, saying that that was not a severe enough punishment.

Mr. QUIN. I observed in the newspapers that there was a doctor at Camp Beauregard who was guilty of some such conduct and was treated in the same way. Do you think that a severe enough punishment?

Gen. GORGAS. No; I agree with the Secretary of War that it is not a severe enough punishment. Of course, the court-martial will determine that.

Mr. QUIN. What may seem to be a little incident of that kind, is a mighty big thing for the people who are interested, and the people are going to hold responsible not only you, but Congress. I know you do not want your department to have such a reputation as that.

Gen. GORGAS. No; I do not.

(Thereupon, the committee adjourned to meet to-morrow, Tuesday, January 29, 1918, at 10 o'clock, a. m.)

COMMITTEE ON MILITARY AFFAIRS,
HOUSE OF REPRESENTATIVES,
Tuesday, January 29, 1918.

The committee met at 10 o'clock, a. m., Hon. S. Hubert Dent, jr. (chairman), presiding.

STATEMENT OF MAJ. GEN. WILLIAM G. GORGAS, SURGEON GENERAL, ACCOMPANIED BY COL. C. R. DARNALL, COL. W. O. OWEN, COL. J. D. GLENNON, AND COL. C. C. McCULLOCH, MEDICAL CORPS, AND MAJ. BRADLEY DEWEY, SANITARY CORPS—Concluded.

The CHAIRMAN. Gen. GORGAS, I want to run through the items for the medical department, for the purpose of getting you to put into the record a detailed statement of each one of the items, and then we will ask you general questions.

I believe I asked you yesterday to put into the record a detailed statement of the different items in reference to the medical and hospital departments. I wish you would do the same in reference to the item on page 55, "Hospital care, Canal Zone garrisons."

Gen. GORGAS. I can give you that now.

The CHAIRMAN. All right, you may do that.

Gen. GORGAS. That comes about in this way. They have on the Canal Zone a general hospital for the construction and operating force of the canal, which takes in Army patients. The appropriation this year to reimburse the canal for that service is \$35,000, and that is not nearly enough, and so we have estimated for the next fiscal year for an appropriation of \$60,000.

The CHAIRMAN. You will be short this year?

Gen. GORGAS. We will be short this year on that item. We have estimated a deficiency of \$25,000. It is really just a question of bookkeeping. It is simply one branch of the Government paying another branch of the Government.

Statement "AA" appended.

No adequate Army hospitals having been provided for the care of the seriously sick at the military posts in the Canal Zone, the necessity of sending them for treatment into the hospitals of the Panama Canal will continue during 1919.

The cost of similar service for the fiscal year 1915 was \$29,618.92; for 1916, \$33,709.18; for 1917, \$41,928.60. The increasing cost is due to the successive enlargements of the garrisons. To cover the enlarged garrisons of 1919, it is believed no less than \$60,000 will be required.

Statements are appended showing (1) the items of expenditure under this head for the fiscal year 1917, and for the first four months of the current fiscal year; (2) the increases in the Canal Zone garrison from July, 1916, to the latest date available; and (3) the approved charges payable to the Panama Canal for hospital care furnished Army patients.

Number of hospital days and cost of services, Panama Canal hospitals, July 1, 1916, to Oct. 31, 1917.

Obligated fiscal year 1917:	
Civilian employees, 570 days, at 30 cents per day.....	\$171.00
Civilian employees, 75 days, at 60 cents per day.....	45.00
Civilian employees, 4 days, at \$1.10 per day.....	4.40
Officers, 430 days, at 50 cents per day.....	215.00
Enlisted men, 683 days, at 60 cents per day.....	409.80
Enlisted men, 29,564 days, at \$1.10 per day.....	32,520.40
Total.....	33,365.60
Private rooms.....	322.50
Surgery.....	8,240.50
Grand total.....	41,928.60

Total days, 31,326.

Obligated fiscal year 1918 (to Oct. 31, 1917):	
Civilian employees, 81 days, at 30 cents per day.....	\$24.30
Officers, 126 days, at 50 cents per day.....	63.00
Enlisted men, 217 days, at 60 cents per day.....	130.20
Enlisted men, 12,078 days, at \$1.10 per day.....	13,285.80
Total.....	13,503.30
Private rooms.....	183.00
Surgery.....	4,181.75
Grand total.....	17,868.05
Total days, 12,502.	

Recapitulation.

Total number of hospital days 43,828, for which was paid the sum of....	\$46,868.90
Total amount for private rooms.....	505.50
Total amount for surgery.....	12,422.25
From July 1, 1916, to Oct. 31, 1917, 43,825 hospital days' services, amount to.....	59,796.65

Strength of Panama Canal Zone garrisons, July, 1916, to November, 1917.

	Officers.	Enlisted men.	Total.
1916.			
July 31.....	218	6,795	7,013
Aug. 31.....	231	6,858	7,089
Sept. 30.....	224	6,721	6,945
Oct. 31.....	223	6,748	6,971
Nov. 30.....	217	7,016	7,233
Dec. 31.....	216	6,977	7,193

Strength of Panama Canal Zone garrisons, July, 1916, to November, 1917—Continued.

	Officers.	Enlisted. men.	Total.
1917.			
Jan. 31.....	231	6,997	7,228
Feb. 28.....	239	7,083	7,322
Mar. 31.....	232	7,305	7,537
Apr. 30.....	229	7,386	7,615
May 31.....	235	8,462	8,697
June 30.....	266	10,655	10,920
Footing for year.....	2,790	89,033	91,823
Average for year.....	233	7,419	7,652
1917.			
July 31.....	327	10,886	11,213
Aug. 31.....	286	10,822	11,108
Sept. 30.....	272	10,592	10,864
Oct. 31.....	292	10,495	10,787
Nov. 30.....	301	10,648	10,952
Footing for 5 months.....	1,481	53,443	54,924
Average for 5 months.....	296	10,688	10,985

PANAMA CANAL HOSPITALS.

Rates of charge approved by the Secretary of War September 21, 1915, for the care at public expense of officers and soldiers in the hospitals of the Panama Canal:

Ordinary care and treatment in ward, per day.....	\$1.50
Ordinary treatment in insane ward, per day.....	1.00
Treatment in private room, additional, per day.....	1.50
Special nurses, additional for each, per day.....	4.00
Special maid or attendant, additional for each, per day.....	1.50

Surgical operations, 10 per cent of schedule. (The operative schedule exhibits fees from \$5 to \$500, according to the nature of the operation.)

NOTE.—The first two items above include subsistence, which in the cases of enlisted men are payable out of the subsistence appropriation, and in the case of officers out of their own funds. The net rates chargeable to "Hospital care, Canal Zone garrisons," are therefore as follows:

Item 1. Enlisted men, \$1; officers, 50 cents.

Item 2. Enlisted men, 60 cents.

The other items, when allowable, are paid from "Hospital care, Canal Zone garrisons."

The CHAIRMAN. The next two items are, "Army Medical Museum and library: For Army Medical Museum, preservation of specimens, and the preparation and purchase of new specimens, \$10,000," and "For the library of the Surgeon General's Office, including the purchase of the necessary books of reference and periodicals, \$20,000." For the Army Medical Museum you had an appropriation of \$5,000 last year, and for the library of the Surgeon General's Office you had an appropriation at the last session of Congress of \$15,000. So that you are asking for double the appropriation for the Army Medical Museum and for an increase of \$5,000 in the appropriation for the library of the Surgeon General's Office.

Gen. GORGAS. We ask for the Army Medical Museum an appropriation of double the amount of the appropriation for the present fiscal year. We are expanding the museum very rapidly. There is an immense deal of material coming from the war in Europe, specimens of all kinds from the hospitals for the museum. That is one of the large museums of its kind in the world just now, and this

material will be exceedingly valuable. We ask for \$5,000 more than we had last year in order to meet the emergency.

The CHAIRMAN. Have you spent the \$5,000 appropriation you got last year?

Col. OWEN. We have spent \$4,700.

The CHAIRMAN. Is this for the purchase of books mainly?

Col. OWEN. No; it is for the preparation of specimens. The second appropriation, for the library, refers to the purchase of books.

The CHAIRMAN. You are asking for an increase in both appropriations.

Gen. GORGAS. Col. McCulloch can tell you what the other general items are to be included.

Col. McCULLOCH. The appropriation we get from this committee for the library is for the purchase of books and medical journals. The other expenses of the library come from some other appropriation.

The CHAIRMAN. Will you please put in the record a detailed statement of these two items under the general head, "Army Medical Museum and Library," with a general statement as to the reasons for the increase you are asking?

Mr. TILSON. Will you state, in a general way, the nature of the specimens you preserve?

Gen. GORGAS. Those will include all that we will get from our base hospitals in Europe. There will be, for instance, crushed joints and broken bones, and anything of surgical and medical interest, with the large number of casualties that will occur over there. Col. Owen could go into that in more detail.

Mr. TILSON. In a general way, not in great detail, I would like to know what they are going to do with that money.

Col. OWEN. The material over there is not being collected as it ought to be, because it ought to be sent over here for the guidance of our own men in caring for our future injured.

The studies that have taken place are all very important, and they are not being put in this museum, where they should be collected, where the studies could be made by a group of men rather than by individual men. Those things are now being studied by individual men rather than by groups of men, and in that way much of the study is being duplicated, and much time and effort is being wasted, which ought to be put on the whole thing. Then the studies would go ahead much more rapidly, and the results would be produced much more rapidly.

Mr. TILSON. Then your idea is that from these specimens a study could be made by groups of trained men in this country that might be immediately, or at least very soon helpful, and then by the preservation of these specimens they might carry lessons which would be useful in the future?

Gen. GORGAS. Unquestionably.

Mr. McKENZIE. Will these specimens you speak of be the actual bones, or photographs?

Col. OWEN. We will have the actual bones, and then we will also have photographs of them.

Mr. McKENZIE. The bones will be deposited in the museum, and they would not be of very much use to the groups of doctors, it seems to me, because they would not be there, and therefore they would have to make the studies from the photographs.

Col. OWEN. No, sir; they would make the studies themselves, from the bones themselves.

Mr. McKENZIE. You would collect a sufficient number for that purpose?

Col. OWEN. Yes, sir.

Gen. GORGAS. We have a museum there with a large number of specimens from the Civil War, and also specimens from all over the country since that time.

Col. OWEN. At the present time the space has to be devoted to other purposes, and consequently the specimens are not on public exhibition at all. The public exhibit is intended largely for people who can teach themselves, and I do not believe the museum ought to be used for the purpose of a collection of curios, but rather for material that could be studied for the benefit of the Army itself.

The intention was to get a group of selected men who have an international reputation, like Louis Wilson, of the Mayo Foundation, and give to each three or four other men whom he personally knows to be quick and accurate observers, to examine and select this material for study, to go around to the various hospitals and collect this material as it is produced.

For instance, the study of the trench foot has not been made to any great degree. Many of the injuries going on are comparatively new, and there are new methods of treatment, and that work ought to be done by a collective agency, rather than by individual men.

Many of the men who are doing that work now have gone to the personal expense of taking with them artists and paying the expense of these men to produce these things in color. Many of these men are making studies of these things and placing them in the museums of their own institutions. They ought to be collected together in one group, so that a group study can be made of them; otherwise the studies and the work are inevitably duplicated, time and time again.

Gen. GORGAS. I think I ought to say, Mr. Chairman, that this appropriation does not pertain to the pay of the men who do this work, but pertains principally to the expense of packing and shipping the stuff.

Col. OWEN. And for the alcohol and the instruments used in making the preparations.

Gen. GORGAS. The men engaged in the work will be officers in the Army.

Col. McCULLOCH. I would like to make a short statement, Mr. Chairman, in reference to the library.

The CHAIRMAN. We will be glad to have you make a statement about that.

Col. McCULLOCH. I do not desire to go particularly into any explanation with reference to the figures, but I simply want to make a short statement in reference to this particular item because I do not believe the committee understands what the Surgeon General's library is. I am sure a great many of our most intelligent friends do not know about it.

They think it is a sort of revolving bookstand in the Surgeon General's office.

As a matter of fact, this library has rapidly grown from that stand. It was in that shape about the time of the Civil War, when

Dr. Billings took hold of it, and he has developed it until it has grown to be what we now claim to be the largest and best medical library in the world. The Surgeon General's library is now the library of the whole medical profession of the country, and, to a large extent, of the medical profession abroad. We have about half a million volumes, and we really occupy the same position with reference to the medical profession that the Library of Congress occupies with respect to general literature.

The CHAIRMAN. In other words, it is a complete medical library?

Col. McCULLOCH. That is true. The fact is that we try to get everything published of a medical sort, and the appropriation of \$10,000 that we have been getting has not enabled us to do that work as it should have been done.

The CHAIRMAN. You got \$15,000 last year?

Col. McCULLOCH. The other \$5,000 was for the museum, \$10,000 was for the library.

Mr. LUNN. When I was reading over this bill, I thought to myself, Gen. Gorgas will not have time to read the books he wants in that library. I thought this referred to reference books which he needed in his particular office.

Col. McCULLOCH. We furnish those books to other doctors all over the country.

Mr. LUNN. Your statement in regard to the library is new to me.

Col. McCULLOCH. We loan books to doctors all over the country, and the doctors in the far-away mining camps, or in the country districts can borrow these books from us. We practically furnish the whole medical profession in the country with the books they want to borrow from us.

Mr. TILSON. I see that the amount of the appropriation you are asking for this year is double the amount of last year.. Is it intended that so many more books are going to be bought?

Col. McCULLOCH. I was going to say the appropriation has been insufficient for several years, and the war coming on has made a big difference. There are a good many more books published, medical books, and the cost of books has gone up with the price of paper.

Mr. TILSON. So far as getting books in reference to the things that have been learned in this war is concerned, in general, it seems to me that books written right now are probably as of little public value as any books we can buy, because they are written in the midst of a state of flux. You do not know whether your books you are getting now are going to be of value next year.

Col. McCULLOCH. I think there is a medical literature of tremendous value being published right now.

Mr. LUNN. You want to trace the evolution of the science of medicine anyway?

Col. McCULLOCH. Yes.

Mr. TILSON. By doing that you will be able to make one stage in the progress of the science?

Col. McCULLOCH. Yes. Now, in addition to that, I think we subscribe for 1,800 medical journals, besides the books we buy. If it were not for the fact that we get the copyrighted books for nothing from the Library of Congress, we would not come out at all. The Library of Congress gets two copies of each book copyrighted, and

gives us one of those copies. That, of course, applies only to the books on medical subjects.

Mr. McKENZIE. In what building is that library located?

Col. McCULLOCH. It is located in the building on the Mall, just east of the old National Museum Building, at the corner of Seventh and B Streets SW. It is one of the large buildings in the group of buildings on the southern edge of the Smithsonian Grounds.

Mr. McKENZIE. You have ample room there?

Col. McCULLOCH. We are trying to get another building, although we are getting along fairly well at the present time. I have to keep a certain amount of money ahead on this proposition of buying German books, because we are not getting those now, and in order to get them at all we have to keep ordering them.

Mr. SHALLENBERGER. Do you intend to collect German books?

Col. McCULLOCH. Yes; we must get those after the war.

The CHAIRMAN. How much of this appropriation of \$10,000 have you spent up to date?

Col. McCULLOCH. We spend it by half years. For the half year just gone we have spent about \$4,500 out of the \$5,000 we allot ourselves for each half year. The fact that we have not spent the entire \$5,000 allotted for the first half year does not indicate that we could not have spent it.

The CHAIRMAN. If you had had more you could easily have spent it?

Col. McCULLOCH. We could spend any amount of money for getting old historical books we would like to get in the library, such as the Library of Congress gets in other branches of science and art.

The CHAIRMAN. If we did not give you an increased appropriation would you be able to keep up your subscriptions for the 1,800 medical journals for which you subscribe?

Col. McCULLOCH. No, sir.

Mr. LUNN. Are these historical books you refer to in the Congressional Library now?

Col. McCULLOCH. The Library of Congress selects that class of books in other branches of science and art, but not medical books of that character.

Mr. LUNN. So that if you do not collect them the Government will not have them?

Col. McCULLOCH. They are lost to the country. I am speaking of the incunabula that were published in the fifteenth century. They are like any other objects of art or literature; they are very valuable.

Mr. LUNN. If you do not get the money to buy them, the Government will not have them?

Col. McCULLOCH. They will not have them. They rely on us entirely in this country for medical literature. I have here a volume containing the titles of the books we have. That simply contains the bare titles of the books.

The CHAIRMAN. It is an index catalogue.

Col. McCULLOCH. It is an index catalogue. We send copies of this catalogue to the doctors out on the frontier and in various out-of-the-way places, and they can borrow such books from us as they want.

The CHAIRMAN. I understand any doctor can send to you and borrow such books as he wants.

Col. McCULLOCH. He can borrow anything he wants.

The CHAIRMAN. Do you lose many of them in that way?

Col. McCULLOCH. We have not lost any in four years.

Mr. LUNN. It seems to me that is a very excellent arrangement.

Col. McCULLOCH. Very few of the doctors seem to understand about the loaning of those books, but that loaning business is growing every day, and we are loaning a tremendous lot of books now.

MEMORANDUM RE ESTIMATES 1919 FOR ARMY MEDICAL MUSEUM AND LIBRARY.

If the museum and library are to fulfill the object for which they were established and maintain their present status among similar institutions of this and other countries, it will be necessary to provide larger appropriations to meet the increased cost of operation.

It is therefore urged in submitting estimates for the 1919 appropriation that the sum of \$10,000 be provided for the museum in lieu of the \$5,000 ordinarily carried and \$20,000 for the library in lieu of \$10,000 as heretofore.

The present library appropriation (\$10,000) was established years ago when the demands on the library were, as compared with the present, very light. Since that time medical literature as a whole has more than trebled, rendering it more and more difficult for the library to keep abreast with it. The increase in appropriation asked for is believed to be absolutely necessary for the following reasons:

1. The cost of all publications, but especially the limited editions of scientific publications, has advanced enormously in the past two years.

2. Foreign booksellers through whom publications are of necessity secured have advanced their commission charges or reduced the amount of discount allowed.

3. The object of the library is to secure all worth-while medical literature. The amount of this literature has constantly increased, and recently the amount of literature on the purely medico-military features of the war has been greatly augmented. If the index catalogue of the library is to continue to be practically a bibliography of the world's medical literature, the funds for the purchase of the publications must be increased.

The increase in appropriation for the museum is asked in order that the present plans of making this in every sense of the word a national medical museum may be carried out. It is proposed to establish here a permanent exhibit of medical and medico-military specimens which will rank with exhibits of similar institutions on the continent of Europe.

The amounts asked for, if allowed, will be distributed approximately as follows:

Army Medical Museum.

For purchase of specimens.....	\$5, 000
For supplies and equipments for preparation and preservation of specimens..	4, 900
For transportation on museum account.....	100
Total.....	10, 000

Library, Surgeon General's Office.

For books, periodicals, photographs, engravings, etc., for deposit.....	\$18, 000
For equipments and utensils for library use.....	1, 500
For transportation on library account.....	500
Total.....	20, 000

MEMORANDUM.

JANUARY 29, 1918.

It should be borne in mind that this appropriation, being for the library of the Surgeon General's office and the museum of the Surgeon General's office, just what these two organizations represent. The library of the Surgeon General's office is the great clearing house for medical literature in the world. It is not alone the library of the Surgeon General's office. That is an entirely incidental function. Nearly all of the books of the American medical world are written largely through the facilities afforded to the profession by this library.

The museum, if it is to fulfill its function at all should have a very much larger pathological collection than it at present possesses, and it should become the greatest

clearing house of medical specimens in the world, where advanced students could come and have every facility and every pathological specimen necessary made immediately available to them, so that as they study the books in the library they should have the pathological material available, so that they may go over other men's studies, examining this material and slides left here from other's studies previously made, making fresh studies from the material itself, and in this way verify and reinforce other men's work.

This war should not be allowed to pass without benefit to the race as a whole. It should be borne in mind that the medical schools, together with all other professional schools of Europe, are now destroyed and we will be compelled, whether we will or whether we wont, to take the leadership in medicine, and if we have this pathological material where the men of the present day may have it, right alongside of the pathological material of the last great war, where they can study this and the literature side by side, it will be of infinite value to the profession as a whole, and thereby to the people of the United States, as well, because everything that benefits or interests the profession of medicine is necessarily, either directly or indirectly, of benefit to the people of the United States.

For the above reasons, I have persuaded the Surgeon General that the least possible amount with which the work of the museum can be done is \$10,000. This amount it will be necessary to have in order that I may be able to purchase alcohol and other necessary fluids for the preservation of this material, for the purchase of instruments with which to make proper preparation, and for the examination of the material, for the purchase of containers in which to preserve it, and in order to pay for transportation charges and other necessary detail for the obtaining, preservation, and study of this material.

As for the library, the \$10,000 which has been annually allowed in the past is not, in my judgment, sufficient to enable the librarian to make the necessary purchases to secure annual publications, and he can use to a very great advantage the \$20,000 asked for.

Regarding this appropriation of \$20,000 for the library of the Surgeon General's office, this increase of \$10,000 is based upon the conviction that at this particular time everything available relating to the profession should be obtained, so far as possible.

In detail, I would invite your attention to the following:

1. The rise in the prices of books, due to the large increases in the cost of paper, ink, type metal, and all other materials which enter into the process of bookmaking.

2. The immense production of literature, both foreign and domestic, relating to the medical and surgical activities of the present world war, which it is necessary for the library to add to its collection.

3. The large amount of foreign literature necessary to complete the library's files which is being contracted for, for delivery at the close of the war. If the latter should continue longer than the end of the present fiscal year, such sums of money as have been set aside for this purpose out of the annual appropriations for the past two years will, under the law, revert to the Treasury as an unexpended balance.

4. The unusually favorable opportunities now arising from the unsettled condition of the European market, for the purchase at comparatively low figures, of rare old medical works, of which the library already possesses the largest and most valuable single collection in the world, and which it is desired to add to while it is possible to do so at a minimum expenditure.

W. O. OWEN,
Colonel, Medical Corps, United States Army,
Curator, Army Medical Museum.

The CHAIRMAN. I would like to return to the item on page 48, General, for the—

Construction and repair of hospitals: For construction and repair of hospitals at military posts already established and occupied, including the extra-duty pay of enlisted men employed on the same, and including also all expenditures for construction and repairs required at the Army and Navy Hospital at Hot Springs, Arkansas, and for the construction and repair of general hospitals and expenses incident thereto, and for additions needed to meet the requirements of increased garrisons, and for temporary hospitals in standing camps and cantonments. For the alteration of permanent buildings at posts for use as hospitals, construction and repairs of temporary hospital buildings at permanent posts, construction and repair of temporary general hospitals, rental of grounds and rental and alteration of buildings for use for hospital purposes in the District of Columbia and elsewhere, including necessary temporary quarters for hospital personnel, outbuildings, heating and laundry apparatus, plumbing, water and sewers, and roads and walks for the same.

You are asking this year for \$25,000,000 for that item, and at the last session of Congress you got \$37,865,267. I suppose that decrease is almost entirely due to the fact that the hospitals have been constructed?

Gen. GORGAS. We have done a great amount of construction. That is the reason for the decrease.

The CHAIRMAN. Will you put into the record a statement showing the different items included under this heading?

Gen. GORGAS. I will be glad to do that.

(The statement referred to is as follows:)

For construction of hospitals at military posts already established and occupied.....	\$3, 646, 000
For repair of hospitals at military posts.....	3, 860, 000
For repairs Army and Navy, General Hospital.....	10, 000
For construction of general hospitals.....	12, 970, 000
For repairs, general hospitals.....	330, 000
For additions to meet increased garrisons.....	907, 000
For temporary hospitals.....	3, 277, 000
Total.....	25, 000, 000

The foregoing is calculated upon the needs of a total force of approximately 1,500,000 men. If the force raised for 1919 is materially greater, say 2,000,000 or 2,500,000, additional amounts hereunder will turn out to be necessary about in proportion to the increase of the forces.

The CHAIRMAN. These hospitals were constructed, I believe, partly under your jurisdiction and partly under the jurisdiction of the Quartermaster General's Department, were they not?

Gen. GORGAS. They were constructed altogether under the direction of the Quartermaster General. We had nothing to do with the work done by the Quartermaster General's Department.

The CHAIRMAN. Were they not constructed after consultation with you as to the plans?

Gen. GORGAS. We supplied the plans.

The CHAIRMAN. Your plans were not fully carried out in every particular as to the space, for instance?

Gen. GORGAS. The question of space applied to the barracks.

The CHAIRMAN. Your plans were carried out as far as the hospitals were concerned?

Gen. GORGAS. Yes, sir.

The CHAIRMAN. I have heard some criticism, General, of the base hospitals in some of the camps in the South, to the effect that they were not heated. What have you to say about that?

Gen. GORGAS. That applies to the hospitals of the National Guard.

When the war broke out the question was raised about the various cantonments, and it was decided that the National Guard would go overseas very rapidly; that they would be in divisions; and that they would have the equipment they would need when they were in the field in France. For instance, the hospitals would be, while the men are in this country, just as the men, under canvas. A little later when we made requisition for the canvas for the hospitals, the Quartermaster General's Department did not have it, and told us they would not be able to furnish it, and so it was decided to build the wooden structures, very much cheaper and less elaborate than the ordinary hospitals we planned for the National Army, which were to be of a permanent character.

Then when it was found later, in August, that the commands would not be gotten over before winter, it was decided to put heat and water in these wooden hospitals. The heat and water in most of them has not been gotten in yet. It has all been allowed and ordered, and the funds have been provided, but the actual work has not been done.

The CHAIRMAN. Can you tell us how many have not been heated yet?

Gen. GORGAS. The National Army hospitals have heat and water in them. None of the National Guard hospitals, as far as we know, have gotten those things in them yet. We have steam heat and water in the hospitals.

All of the hospitals, as the cold weather came on, were supplied with stoves. I am speaking now of the National Guard camps, which are on a different basis and plan than that of the National Army cantonments, and most of the difficulty that has been met refers entirely to the National Guard camps.

The CHAIRMAN. We have noticed that there has been a discrimination between the National Army and the National Guard all the way through, unfortunately.

Gen. GORGAS. The reason for that was the difference in the plans for the National Guard and the National Army. The National Army cantonments were known to be permanent for the war. The National Guardsmen were supposed to be in camp, and were supposed to go abroad in a few months, and it was supposed that they would be in camp here just as they would be when they got to France.

The CHAIRMAN. Then the excuse for the discrimination is that you expected to send the National Guard over to France first, and you expected to have them over there before the winter season started?

Gen. GORGAS. Yes.

Mr. TILSON. I can corroborate that, because I went through a number of National Guard camps, and I said to the commanding officers, "You are going to suffer a great deal here this winter, with these accommodations." In every camp I found the idea prevailing that they were going to France before the winter set in.

Mr. GORDON. What time did you visit those National Guard camps?

Mr. TILSON. I visited those camps in September, and that was the feeling there, and that feeling seems to have permeated headquarters in Washington.

Gen. GORGAS. I would like to go into a little further explanation of that matter. Take, for instance, the division which is at Camp Meade now, and the division which is at Camp Wheeler, at Macon, Ga. When they get to France they will all have the same camp equipment. The reason why the men at Camp Meade are housed differently is because it was known that that cantonment was built for the duration of the war. The division at Camp Wheeler originally started out with the idea that they would be there only a few months. When they get to France they will have the same equipment.

The CHAIRMAN. They will all have tents in France?

Gen. GORGAS. They will be like a moving command, as the English and French troops will be, if they ever get to fighting again in the field. All of those commands have to be equipped with the expectation of pitching camp at night and breaking camp the next morning.

The CHAIRMAN. After it was determined by the War Department that we were not going to send the National Guard troops over as early as the department originally intended, why could not those hospitals have been heated then?

Gen. GORGAS. As soon as it was determined upon, about the middle of August, the heating apparatus and water supply were authorized.

The CHAIRMAN. But you say those things have not been put in the National Guard hospitals yet?

Gen. GORGAS. Stoves were put in. The water is being put in much more rapidly. Col. Glennan says that his reports show that some of them have water in the hospitals now.

Mr. TILSON. What about the sewage disposal plants?

Gen. GORGAS. In none of the National Guard camps is there a permanent system of sewerage actually connected up.

Col. GLENNAN. The water and sewerage systems are being put in the hospitals at the same time.

Mr. McKENZIE. Have you visited any of these National Guard camps since the weather has been cold?

Gen. GORGAS. Yes, I visited some of them as late as the early part of December.

Mr. McKENZIE. How did you find the condition in those hospitals with the stoves in them? Were they able to heat the hospitals comfortably, or were the men suffering from the cold.

Gen. GORGAS. No, I think they were comfortable. The wards there had great big furnaces in them, such as you heat houses with, with the tops taken off, and they had two or three smaller stoves in every one I went in. The camps which I visited were the National Guard camps from which we were getting the worst reports. I visited none of the very good camps, but in the last two or three months I visited all the camps where we are having trouble.

Mr. McKENZIE. Would there be any connection between the use of stoves and the character of heat furnished by stoves and the prevalence of pneumonia? That is, do you think there would be more cases of pneumonia where they had steam heat or furnace heat than where they have just the stove heat? In other words, would there be any connection between the cooling down of the stoves and the fact that there was a greater amount of pneumonia in those camps?

Gen. GORGAS. I am inclined to think there is no very close connection between those things. In one or two of the National Army cantonments, which have steam heat and where that has been going on for some time, we have about as much trouble as we have in our most troublesome National Guard camps. Camp Pike, for instance, at Little Rock, is giving us as much trouble as far as pneumonia cases are concerned as anything else we have had, and that is a permanently constructed steam-heated cantonment.

Mr. GREENE. I understand Secretary Baker has stated that they did not contemplate in the beginning sending any considerable number of troops to France until probably this spring, or something like that, and that that was in large measure accountable for some of the apparent discrepancies, and it was a matter of preparation that would take that much time. Yet, as I understand your statement, preparations were deliberately made at the outset for the construction of relatively temporary structures and accommodations for the National

Guard because it was thought they were likely to go right overseas.

Gen. GORGAS. Before the cold weather.

Mr. GREENE. How does your statement compare with the statement of Secretary Baker, that there was no general movement of troops contemplated?

Gen. GORGAS. I do not know about that in detail. I recollect that I heard that the General Staff were urging and were in favor of not sending the Army over until it was fully trained. My information is all a matter of hearsay. I have no definite, personal knowledge on that subject.

Mr. GREENE. And yet, if they went ahead on the policy then under contemplation, that they would stay here until spring, it appears that the National Guard were to be furnished with temporary quarters, without adequate preparation for the winter, and the National Army had every possible convenience provided for them.

Gen. GORGAS. You mean when it was contemplated——

Mr. GREENE (interposing). As I gather from the statement of the Secretary of War, no general movement of troops other than such preliminary movement of the pioneering people as might be necessary was contemplated until toward spring, and that he explained as the reason for certain lack of preparedness, and because the policy was to be followed of not preparing to send fully equipped and organized troops to France in the larger bodies. And yet at the very time when this policy of not sending troops overseas appears to have been determined upon, the plan, as you outline it, indicates that preparations were made for temporary quarters of National Guard troops on the supposition that they would go over and would need only temporary quarters in the meantime.

Gen. GORGAS. We were always told that the National Guard, up to August, were to be tented camps.

Mr. McKENZIE. Is it not true that the Quartermaster General took the position, or the General Staff took the position, that they would put them all in tents, but owing to the lack of tentage they found it would be impossible to do that, and therefore it was necessary to construct wooden cantonments for the National Army, and the element of cost entered into it also. Is there not something to that?

Gen. GORGAS. The information we had was always that the permanent cantonments were to be wooden structures. We never had any plan presented to us for the use of tents for the National Army.

Mr. McKENZIE. Is it not a fact that the Quartermaster General stated to this committee that that was due to the fact that they could not obtain the tentage?

The CHAIRMAN. There was some testimony by the officers from the Quartermaster's Department that there was a shortage in tentage.

Mr. GREENE. It comes back to this proposition, whatever may be the incidental details, that the Secretary of War announced that the first plan of the War Department, and apparently the plan upon which the general preparations were founded, contemplated holding the troops in this country until they could be organized and equipped and trained and gotten in condition to be sent overseas in considerable numbers, toward the springtime, and that this plan, it appears, was afterwards disarranged because France began to call for troops,

so that they had to hurry some troops to France. And as the Secretary said, this disarranged the general plan.

Notwithstanding that explanation, however, it is apparent, from your testimony, and apparent from the facts that from the beginning the quarters of the National Guardsmen were made of a temporary character, evidently with the expectation that they would be sent to France before winter set in. How do those two statements gibe?

Gen. GORGAS. The information we had with regard to tentage for the winter came about the 1st of August, or somewhere about that time, when we made a requisition for heat and water.

Before that time we had applied for the tentage for the hospitals, under the general plan, and then we were notified by the Quartermaster General that he did not have tentage, and then it was decided to make the hospitals wooden structures, but that was merely because we did not have tentage. If we had had the tentage, the hospitals would have been put in tents, just as the rest of the camps.

Mr. GREENE. I can see how the Medical Department follows its custom, so far as the policy of the War Department is concerned, but your testimony brings out the fact that one explanation runs in one direction, and the other explanation runs in another way.

Gen. GORGAS. This is just my supposition of what occurred, that the plan of the Army remaining here until it was trained was settled very early before any information came to us, and when we got the information that plan was pushed aside, and they had determined upon sending the Army abroad as soon as they could. My information was just hearsay.

Mr. MORIN. They decided on the change before they put the men in the camps.

Mr. GREENE. Whatever may have been the various steps and the uncertainty of the policy, when the policy was finally decided upon, and it was concluded that they would remain here, it is a fact that one part of the Army was given permanent quarters and the other part was given temporary quarters.

Mr. MORIN. Secretary Baker said yesterday that, so far as the American medical association was concerned, they concerned themselves about the cantonments, and as far as the men in the tents were concerned, there was not so much concern about them because it was said they would be more healthful in the tents.

Mr. McKENZIE. Eliminating the question of the suffering of the soldiers, what do you say as to the effect on the health of the men, whether it would be better if they were housed in wooden cantonments or in tented camps?

Gen. GORGAS. As a general proposition, I would prefer tents to the regular wooden buildings.

Mr. McKENZIE. You think that the health of the soldiers would be better conserved in tents than in the wooden cantonments?

Gen. GORGAS. As a general proposition, I think so, other conditions being equal.

May I go back again to the question brought out yesterday by Mr. Shallenberger in reference to the death rate?

The CHAIRMAN. The death rate in the Army?

Gen. GORGAS. Yes, we were discussing the death rate, and I took the position——

The CHAIRMAN. I wanted to bring that out a little later.

Gen. GORGAS. Very well.

Mr. GORDON. General, you have just stated that the first plan of the General Staff, or the military authorities, was not to send any men to Europe until they were fully trained. Will you be kind enough to elaborate a little upon that term "fully trained," telling us what you understand by men being fully trained, and how much time would be involved in subjecting them to that training.

Gen. GORGAS. I was merely giving what I understand to be a general report.

Mr. GORDON. I understand that, but what I wanted to know was what you understood to be comprehended as to the time required, and other things in the term "fully trained."

Gen. GORGAS. I am merely giving my opinion. I have my opinion in regard to it, just as you would have yours. I know nothing of what they did about it at the time.

Mr. GORDON. But, having used the term "fully trained"—

Gen. GORGAS (interposing). You mean what I mean now?

Mr. GORDON. Yes.

Gen. GORGAS. I meant what I understood the newspapers to mean, that the men would be trained for a year, and that they would be soldiers when they went to France.

Mr. GORDON. You understood that it involves training the men for a year before they were sent overseas?

Gen. GORGAS. I know nothing more about it than what I saw in the newspapers.

Mr. CALDWELL. General, I have a telegram which I just received a few minutes ago inquiring concerning the condition of one of our very widely known young men, who is a member of Company I of the Seventh Infantry at Spartanburg, who is suffering, they understand, from pneumonia, and they are very much distressed because of the recent newspaper stories. What I would like to know is, can we get a report back from this particular case some time today; and would it be possible to supply any extra assistance, such as a specially trained nurse? These people telegraph me that they have already sent by telegraph some money to pay for any extra help that might be needed, and I would like to know if it would be possible to have an extra trained nurse for that man.

Gen. GORGAS. If they can get a trained nurse there. If he is a seriously sick man he is probably in a room by himself, with a special trained nurse there.

Mr. CALDWELL. There is one other question I would like to ask you. Have you any general order by which the members of the Medical Department are governed concerning the isolation of soldiers suffering from syphilis?

Gen. GORGAS. We have a general order that is being changed and sent around from time to time that covers all cases of infection.

Mr. CALDWELL. Just before the present session of Congress convened I was called to Allentown, Pa., in the matter of the trial of a man who was afterwards released. I found there a man under charges in a cell which was practically a dungeon, and on a protest he was removed from there and put in a room about one-half the size of this room.

In that room with him were 22 other men, making 23 men all told, one of them having syphilis in an active stage, with an open sore on his mouth. The cots were so close together that some of them had to be folded up and stood up on edge so that the men could move around in the daytime. I protested against that and asked for an investigation.

The Inspector General's office sent an inspector to Allentown, and I was personally present when they brought the testimony and the records in which it was proven that this man had a long history of syphilis; that he had been treated under the old syphilitic method of treatment until his stomach had gone bad, and then it was continued again. The fact that this man suffering from syphilis was allowed in there with those other men was complained of by a civilian who was there attending the trial with me.

The prisoner with syphilis was permitted to stay in the little guard-house for, I think, five days, or perhaps longer than that before he was removed, and he was then removed to a hospital across the street, where he could have been kept at any time. I have protested and written letters about it, and have asked that something be done to punish the man who was responsible for that kind of treatment, and I have not yet heard of anything that has been done, not even the sending of a letter of censure for that sort of handling of that syphilitic man, and keeping him with those other men. I wanted to know if the prevalence of such a condition was in accordance with the rules and regulations of your department, and if not, why something has not been done to show up that condition, and punish the man responsible for it.

HEADQUARTERS EASTERN DEPARTMENT,
Governors Island, New York City, October 27, 1917.

From: Adjutant.

To: Col. E. E. Persons, Medical Department, United States Army, commanding Army Ambulance Service, Concentration Camp, Allentown, Pa.

Subject: Treatment accorded Sergt. (First Class) George E. Louis, acting first sergeant, section 14, Ambulance Corps.

1. Referring to recent investigation concerning the treatment accorded Sergt. (First Class) George E. Louis, section 14, Ambulance Corps, then acting first sergeant, in your command between August 31 and October 11, 1917, the department commander directs that you be advised as follows:

First. Sergt. Louis, a noncommissioned officer of excellent standing, of previous service and a strict disciplinarian, was accused by certain men of his company of improper conduct. Without giving him a hearing you ordered him to be confined. The custom of the service and simple justice demanded that he should be given a hearing, before taking such severe action with a noncommissioned officer.

Second. The only justification for confining a noncommissioned officer is belief that he will desert or that restraint is necessary. In this case the accusation against Sergt. Louis was suspicious, and, in the opinion of the department commander, there was no danger of his desertion, and no necessity for his confinement.

Third. In this case the provisions of the seventieth article of war were not complied with.

Fourth. While it is believed and is shown by testimony that you are humane and considerate of those under your command, and that you have great responsibilities in your large command, and that you are hampered by the ignorance and inexperience of your officers, it is felt that Sergt. Louis has suffered unjust treatment and that your attention must be called to it.

W. A. SIMPSON,
Adjutant General.

HOUSE OF REPRESENTATIVES,
Washington, D. C., January 17, 1918.

Col. E. E. PERSONS,
Army Ambulance Service, Allentown, Pa.

MY DEAR COL. PERSONS: I am endeavoring to secure a commission for Sergt. George E. Louis, in whose behalf you remember I made several trips to Allentown.

I have never felt that Sergt. Louis was guilty of any breach of duty, and it is my desire to have him commissioned as was contemplated when charges were preferred against him. I would like to know if there has been anything in his conduct since the date of his trial which would lead you to believe that he is not worthy of a commission, and, if so, what it is, and whether or not there is anything in his military record which would stand against him in this very laudable ambition?

I would not expect you to stand in the sergeant's way any more than you would expect me to oppose a confirmation of a promotion which you may earn.

Yours, sincerely,

CHARLES POPE CALDWELL, M. C.

JANUARY 23, 1918.

Hon. C. P. CALDWELL,
House of Representatives, Washington, D. C.

DEAR MR. CALDWELL: In reference to your letter of January 17, in which you state that you are endeavoring to secure a commission for Sergt. (First Class) George E. Louis, Medical Department, in which you say, "I would not expect you to stand in the sergeant's way, any more than you would expect me to oppose a confirmation of a promotion which you may earn," you are advised as follows:

1. Sergt. (First Class) George E. Louis was, as you know, sent abroad with his section sometime since. From the time he sailed he is absolutely divorced from any control of mine, directly or indirectly. I have nothing to do with the sections of this organization which are in service in France, and in fact it is very difficult to get any information concerning them. We even have no records of who the officers are who are commanding them, or where the sections are serving, or of the men who now belong to them.

2. After the proceedings of the court-martial which convicted Sergt. Louis and sentenced him to dishonorable discharge from the service had been disapproved by the reviewing authority, and Sergt. Louis had been restored to duty, no dereliction of duty on his part was ever reported to me, and so far as I know he has done nothing which should stand in the way of his consideration for promotion by the officers under whom he is serving.

3. Your inquiry as to whether there is anything in his military record which would stand against him in his ambition to be a commissioned officer should be made to The Adjutant General of the Army, where his record is on file.

4. You may rest assured that I have no desire to stand in the way of the promotion of Sergt. (First Class) Louis. As I told you in the last interview I had with you, in the presence of Maj. Reed, Inspector General's Department, I thought it best that Sergt. Louis be sent abroad at the earliest opportunity, in order that he might be removed from the supervision of the officers who had preferred charges against him and sat on his court-martial and voted for his conviction and placed under the control of entirely new officers, and I pointed out at this time that it was particularly fortunate for him that in going abroad he would probably come under the immediate supervision of Lieut. Col. Percy L. Jones, under whom Sergt. Louis had previously served, and on whose recommendation he had been enlisted in this service as a sergeant. This proposition met with your approval, and with the approval of Maj. Reed at that time. Nothing has occurred to cause me to change my opinion that such an assignment, especially since it placed Sergt. Louis under conditions of active service, where a man has a chance to distinguish himself and earn honorable mention, was not the best course to pursue. I therefore see no reason why Sergt. (First Class) Louis should not merit and obtain consideration of his superiors for recognition for good service, including recommendation for promotion. However, as stated above, matters of this kind are handled abroad entirely.

5. I desire to state that the wording of the last paragraph of your letter, which I have placed in quotation marks in the first paragraph of this letter, is such an unusual one that I have forwarded a copy of your letter, with a copy of this reply, asking that it be placed on file, to The Adjutant General of the Army. I desire to say in this relation, however, that I have received the last promotion which I ever expect to receive in the Army.

Yours, very truly,

E. E. PERSONS,
Colonel, Army Ambulance Service.

STATEMENT OF COL. E. E. PERSONS IN REGARD TO CONDITIONS AT ALLENTOWN CAMP
REFERRED TO BY MR. CALDWELL IN HEARING BEFORE THE MILITARY COMMITTEE,
HOUSE OF REPRESENTATIVES.

1. Mr. Caldwell charges that a man with syphilis and with a sore in his mouth was confined in the guardhouse with other prisoners. This is true and it occurred in this way; orders were given, of course, that all cases of active syphilis should be isolated. When this man was found with a sore in his mouth, his blood was taken and sent to the laboratory at the Army Medical School for a Wasserman test. Report was negative. The doctor, who is a prominent medical man of large practice in Philadelphia, was suspicious concerning the case, however, and took another specimen of blood and sent it in for another test, and because of the man's previous history, began anti-syphilitic treatment. About this time report came to me through the sanitary inspector, Maj. Slee, that it was believed that one of the prisoners in the guardhouse had syphilis. I sent for the surgeon and elicited the above facts, and directed him to isolate the prisoner without waiting to make a positive diagnosis in the case and further advised him that in all doubtful cases, or even in cases in which men were fearful concerning another man in their midst, that man should be removed and kept in isolation until such time as the surgeon was able to positively assure the men that they had no reason to fear anything from the suspect. As stated by Mr. Caldwell, all the facts in connection with this case were brought out by the inspector from headquarters, Eastern Department, who reported his findings in full to the commanding general. The general hygienic conditions under which these prisoners lived were good, and no case of infection of any kind developed among them. As stated by Representative Caldwell, from the time the sore was first noted in the man's mouth until he was removed to the hospital was about five days. I regard the action of the surgeon in this case as an error of judgment due to his lack of familiarity with Army customs, and nothing was developed in the hearings in the case to show that there was any neglect of the patient or lack of carefulness on the part of the surgeon, but simply that he thought it was not necessary to isolate until a positive diagnosis was made. This opinion was apparently shared by the authorities of the Eastern Department, since the commanding general called my attention to certain mistakes in judgment on my part in dealing with this case, in a letter dated October 27, 1917, copy inclosed herewith, but did not mention the matter of the failure to isolate this case at an earlier date.

2. The implication of Mr. Caldwell that there was unnecessary delay in the trial of the prisoners is without foundation. Summary court prisoners were tried promptly from day to day. Regulations do not require that copies of charges be given these prisoners. From June to September we had no general court prisoners at this camp. At this time two cases developed at once. The charges were forwarded to department headquarters as soon as they could be investigated, as required by regulations. It was necessary then for the department commander to get out an order convening a general court, which was done under date of September 13. The cases were then immediately brought to trial. It is true that neither of the two general prisoners were presented with copies of their charges as required by regulations. This was a technical oversight, however, as the prisoners both had counsel, who consulted with them frequently concerning their cases and they knew what they were charged with and could have had copies of the charges had they requested them. The omission was due to the fact that we had had no previous general court-martial cases at the camp, and several minor details in connection with the court procedure were overlooked. The omission, however, was called to the attention of the commanding officer in the letter of the commanding general referred to, copy attached.

3. The impression was current here that Mr. Caldwell, coming here in the capacity of a lawyer to defend a client, unfortunately gave the court the idea that he proposed to have special consideration for his client because of his congressional relations. I inclose a letter herewith, dated January 17, from Mr. Caldwell to me, which unfortunately is open to such a construction. I also append my reply to the same. As stated in my reply, both of these letters have been placed on file by me in the office of The Adjutant General of the Army.

E. E. PERSONS,
Colonel, Army Ambulance Service.

Gen. GORGAS. That is not in accord with instructions. Such a man should have been separated and kept separate from the other men. How long ago was that?

Mr. CALDWELL. That was just prior to the opening of the present session of Congress, some time in November or October. This

syphilitic man was confined with a number of other prisoners in the guardhouse running over a period of weeks.

Gen. GORGAS. It has not come to my attention, and I will be glad to look it up. Did you appeal to the Inspector General's Department?

Mr. CALDWELL. I saw The Adjutant General of the United States Army, and have protested against that treatment, but so far I have heard of no action being taken in the matter of the punishment of the man responsible for that, or even any censure of the medical officers who were responsible.

The CHAIRMAN. Would the medical officer be responsible for that sort of thing?

Mr. CALDWELL. That is a medical cantonment.

Gen. GORGAS. If you will send me the record in the case, I will do what I can with it.

Mr. CALDWELL. I will do that, and I wish you would take the matter up.

Mr. TILSON. I have had some complaints from people who went to Allentown, and I think I have heard all the hard things that could be said about any place spoken about Allentown. I have taken it up with the Surgeon General's office, and the reports seem to be fine, and I did not know, in view of the reports that have been received, whether the people who were complaining were kickers. The reports received from there were fine, but I have received, myself, from no other place where men are stationed, such bad reports as I have heard about Allentown.

Mr. CALDWELL. I was down there myself, and spent two or three days there, and I think the trouble is you have a case of too many Franklins down there.

Mr. ANTHONY. Will you not state what the condition is there?

Mr. TILSON. In the first place, the trouble was about the place where they were kept, and in the next place they were kicking about the food, and the lack of discipline and spirit generally was complained of.

I got one letter from a college graduate whom I knew to be a reliable man, and his picture of the place, covering two full pages of typewritten matter was really very bad, so much so that I went to the Surgeon General's office myself and told the physician in charge in that particular department about it and then he turned to the reports from Allentown and he showed me that, according to the reports, everything was lovely. But he said, "If you will give me the name of the young man, I will have it investigated." I wrote back to the young man and he said, "I would rather take what I get than do that."

Mr. CALDWELL. While I was there attending this trial there were several other men before the court-martial. The articles of war prescribe that each man who is charged with a violation of the regulations shall be given a copy of the charges against him at once, and shall have an opportunity to make reply. No man in the prison while I was there, that I could find out, ever received a copy of any charges preferred against him. No man who was tried while I was there had been in prison less than 20 days, and under the law, if a man is not tried within 10 days, he must be released until he can be tried.

Mr. GORDON. That comes under the control of the Judge Advocate's office, does it not?

Mr. CALDWELL. The members of the court that were there were, without exception, reserve officers.

The attitude of the adjutant was, I thought, open to very severe criticism. He was narrow in his judgment, dictatorial in his manner, and he was harsh, and, in my opinion, cruel.

The CHAIRMAN. General, is it within your jurisdiction to correct those things?

Gen. GORGAS. I can do a great deal at Allentown.

The CHAIRMAN. I would suggest that you have these charges investigated as soon as possible.

Gen. GORGAS. I will be glad to do so.

Mr. LUNN. Were all these men also notified that they had a right to have counsel?

Mr. CALDWELL. Oh, yes; they were notified about that; but in the particular case I went out to try, the man did not get a copy of the charges against him until the day of the trial.

Mr. LUNN. If you had not been there——

Mr. CALDWELL (interposing). He would have been railroaded and put away for three years.

Mr. ANTHONY. Do you mean the prosecuting officer of the Government was cruel and harsh?

Mr. CALDWELL. No.

Mr. ANTHONY. Which officer was cruel and harsh?

Mr. CALDWELL. I think the principal men entitled to censure were Col. Persons and the adjutant, Lieut. Col. Franklin. He was Maj. Franklin at that time, but since then he has been promoted to lieutenant colonel.

Gen. GORGAS. I know a good deal about conditions at Allentown, and there is a good deal of cause for dissatisfaction among the men there. I think that is one of the finest bodies of troops that were ever gotten together.

When the war started, the French Government, through Gen. Joffre, asked us to take over the transportation of all the French wounded. For that purpose we got together 190 ambulance sections, which were all at one time at Allentown. They were principally college boys. There was a section there from nearly every college in the different sections of the country. My own college had a section there, and those men went in with a great deal of enthusiasm. We got them ready, even got their equipment across to France, and got about one-half of the men over. Then we got a cablegram from Gen. Pershing telling us not to send any more, that the French Government said that they did not need any more. Apparently, some friction grew up between the transportation and the ambulance sections in the French Government, and Gen. Pershing was asked not to have any more of those men sent over. These young men went into that work with great enthusiasm, expecting to go to France six or seven months ago. They have been kept at Allentown, and they are disappointed, and I think there is a great deal of dissatisfaction in that camp.

Mr. CALDWELL. I did not find so much dissatisfaction among the men about anything except that there was a general feeling among all the men I talked to, even the commissioned officers of lower rank

who were frank enough to speak about it, that the trouble with the camp was that they had too much Franklin.

It seemed that Maj. Franklin had exercised quite some influence over the commanding officer, Col. Persons, and Col. Persons is a man of the Regular Establishment and ought to have known better. It seemed to me he was following a narrow-minded view that one should not expect to find in the Regular Establishment. I did not find that there was much dissatisfaction among the men, so far as their being sent to France was concerned.

Gen. GORGAS. I was at Allentown not very long ago. There is a general feeling of discontent because they have not gotten to France, and the fear that they are going to be broken up.

Mr. CALDWELL. I think you will find that the question of getting to France is not so much the cause of the dissatisfaction there as the other matter I spoke about.

Gen. GORGAS. I will be glad to look into it.

The CHAIRMAN. General, I would like to go back to the question of disease and deaths at the different camps. I notice you get a weekly statement from each camp, and you send that out every week. I would like to have you explain some things in that.

For instance, take the case of Camp Sheridan, which is at my home town. I want to call your attention to the report made on January 11.

Gen. GORGAS. I hope you will notice that is the best one there.

The CHAIRMAN. Yes. On January 11 there were 8 cases of pneumonia, 5 cases of venereal disease, 2 cases of typhoid fever, 19 cases of measles, and 1 case of scarlet fever, and no deaths, with a percentage of 25.3 noneffective. How do you arrive at that figure of 25.3; 25.3 out of every 1,000 noneffective?

Gen. GORGAS. That is weekly. That means when the report was made if there were 10,000 men in the camp 25 out of every 1,000 were sick; that is, 250 men out of 10,000 were sick.

The CHAIRMAN. Some time during that week?

Gen. GORGAS. At the end of the week, when the report was made.

The CHAIRMAN. You do not go by the number of cases then each week?

Gen. GORGAS. Yes; that indicates the morning sick report when that report was made.

The CHAIRMAN. I want to ask you another thing. On January 16, for instance, the noneffective rate per thousand throughout the entire Army was 46.4 per thousand.

Gen. GORGAS. That is per thousand.

The CHAIRMAN. The admission rate per thousand was 1,547.8. What do you mean by that?

Gen. GORGAS. That means if the number of men admitted to the sick report during that week should continue the same during the year, the rate would be that per thousand men in the Army, that there would be approximately 1,600 men admitted to sick report. That is, every man would get sick about one and a half times during the year.

The CHAIRMAN. What is the death rate in these camps throughout the whole Army?

Gen. GORGAS. It is eight per thousand.

Mr. TILSON. Per year?

Gen. GORGAS. All these figures are yearly figures.

The CHAIRMAN. Eight per thousand per year?

Gen. GORGAS. If those rates continue when we make our yearly report.

The CHAIRMAN. How does that compare with the mortality in the cities?

Gen. GORGAS. Of course, it is much smaller than it would be in the big cities. Take a city like the city of Washington, and the rate would probably be about 20 per thousand.

Mr. CALDWELL. That includes the old men and children, and women?

Gen. GORGAS. Yes; but that would hardly be a fair comparison.

The CHAIRMAN. What would be a fair comparison?

Gen. GORGAS. I think the figures of the Japanese-Russian war, in reference to the Japanese Army, which Mr. Shallenberger gave, would be a fair comparison. That is looked upon as being the best that the army of any nation has ever done.

Mr. SHALLENBERGER. Is it not true that it is the last great war with which we can make a comparison? There has been no great war since the Japanese-Russian war.

Gen. GORGAS. No, no great war.

Mr. ANTHONY. General, have you seen a statement—I think it was given out by a French medical officer in this country—that the percentage of mortality in the French Army is 1.8 per annum of the total number of men, and that includes the deaths in battle and the deaths due to disease.

Gen. GORGAS. I have not seen any such statement, but I should say from my general knowledge, that there is some mistake about it, because that is so much less than anything that has ever occurred before.

Mr. ANTHONY. That may apply only to deaths in battle; probably it does.

Mr. GORDON. It probably applies to deaths from disease.

Mr. ANTHONY. One and eight-tenths per cent.

Gen. GORGAS. That is probably true.

Mr. ANTHONY. And did you say that ours is 8 per cent per thousand?

Gen. GORGAS. Eight per thousand.

Mr. ANTHONY. What percentage of the total number would that be?

Gen. GORGAS. Eight per thousand would be eight-tenths of 1 per cent.

Mr. ANTHONY. Perhaps the statement of this French officer is correct, that their total number of deaths is 1.8 per cent, including all deaths by disease and in battle.

Gen. GORGAS. I think that would probably mean 18 per thousand by disease. That is about equal to the best reports we have ever gotten from any previous war, and the best we have ever gotten was in the Franco-Prussian War, in which the Germans lost from disease 18 per thousand.

Mr. SHALLENBERGER. What did you find out about those figures I suggested yesterday?

Gen. GORGAS. I found you were right, and I was wrong.

The CHAIRMAN. As I understand it, this average death rate of eight per thousand is an annual rate. Do you not expect that rate

even to be reduced, after this winter season breaks? Have you not had an unusual season to contend with?

Gen. GORGAS. We have had this epidemic of measles, which has raised the rate from 3 per thousand to 8 per thousand. Of course, it is difficult to predict what is coming along. Past experience with all great armies shows that when you get a big army together you have a much higher mortality than we have had yet. The best figure, as I say, that has been recorded is that of the German Army in 1871, in the Franco-Prussian War, which was nearly 19 per thousand. I would much rather answer that question two or three years from now. I hope it will be reduced; I think we are going to make the record of the world in this war.

The CHAIRMAN. Would it not be natural to suppose, as far as the camps in this country are concerned, that the men would be in a more healthy condition when this winter season closes? Of course, there are measles and things like that, that come on during the winter season.

Gen. GORGAS. I expect it will be better.

Mr. KAHN. I think the experience of all countries is that in the case of the first soldiers who go to the colors, the standard of health is a very high, and there is apt to be a letting down of the standard as subsequent calls are issued. If there should be any letting down in this country, the chances are that the percentage of mortality would increase correspondingly; is that not true?

Gen. GORGAS. Yes.

Mr. KAHN. And that is the experience of all countries, is it not?

Gen. GORGAS. Yes.

Mr. KAHN. It was so with England, as I understand it. The first troops who came to the colors were exceptionally strong and vigorous, and the health requirements of the English Army officials were very, very rigid. They subsequently let down on some of those requirements, and took men in who would have been rejected in the first call. Did that increase the mortality?

Gen. GORGAS. I can say from my general knowledge that it would, but we have been unable to get any figures so far in regard to the English and French Armies. But that is true in the case of all selected bodies of men. The insurance tables show the same thing.

Mr. KAHN. It is fair to assume if there is any letting down of the rigidity required at the beginning, there would be a corresponding increase in the mortality?

Gen. GORGAS. I have to agree to that, as a general proposition. We expect to do better than that.

Mr. KAHN. You hope to keep up the rigidity?

Gen. GORGAS. I do not see anything else that can come. We are having our let down now. I do not see what is to come after we get rid of the epidemic of measles.

Mr. KAHN. Were the figures correct that we saw quoted originally to the effect that out of 10 men examined for the National Army 6 were rejected because of physical incapacity?

Gen. GORGAS. I am pretty sure that is not the case. I have not gotten the detailed figures from the Provost Marshal General's office, but in general terms we have only called 2,000,000 men to get nearly 700,000 men.

Mr. GORDON. I think it was only 23 per cent in the report itself.

Mr. KAHN. I think the newspapers said 31 per cent.

The CHAIRMAN. I will ask you to put in the record, General, a detailed statement in explanation of the item for quarters for hospital stewards.

Gen. GORGAS. I will be glad to do that.

(The statement referred to is as follows):

United States:

6 single sets of quarters at permanent military posts.....	\$24, 000
4 double sets of quarters at Letterman General Hospital and Fort Sill....	30, 000
Repairs for all posts.....	20, 000

Philippine Department:

New quarters.....	12, 600
Repairs.....	2, 500

Total.....	89, 100
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Mr. McKENZIE. I have a statement here, General, which has been given very wide publicity in the newspapers throughout the country, and I would like to ask you in regard to it. The statement reads as follows:

Five hundred men afflicted with tuberculosis have been withdrawn from the ranks at Camp Wheeler, Ga. The tuberculosis board reported that some of the men had the disease before being drafted, while some of them contracted it in camp. Lack of thorough physical examination was responsible for the acceptance of the first, lack of sanitary environment responsible for the second.

What do you know about that, General?

Gen. GORGAS. I would have to look up my records. It would strike me as being a large number. After the troops were taken in we sent special tuberculosis boards to all the camps, and those boards examined the men, and threw out those men who had consumption.

Mr. McKENZIE. It is not the policy of the Medical Department to permit any man to remain in the service who is suffering from tuberculosis, when that is discovered?

Gen. GORGAS. No. I think they are more nearly eliminated in this Army than they ever have been in any Army before, because we have these special tuberculosis men examining them.

Mr. SHALLENBERGER. How do you determine whether a man has tuberculosis?

Gen. GORGAS. We have all the leading tuberculosis men in the country engaged in this work for us. Originally a man would be taken before a draft board, and he would be examined by the local draft board, and they determine his deficiency, as well as they can. If they recognize tuberculosis, they do not take him in. If he is accepted he goes to the camp he is assigned to and there the members of the Medical Corps examine him and his reception into the Army is determined by their examination.

Mr. SHALLENBERGER. Have you got any infallible means by which you can determine whether a man has tuberculosis?

Gen. GORGAS. No.

Mr. SHALLENBERGER. I was told by the superintendent of the hospital at Las Animas, N. Mex., that practically everybody reacted to tuberculosis, and that there is no rule whereby you can determine when a man has tuberculosis, except in a dangerous case.

Gen. GORGAS. That is an absolute fact. Nobody can say, absolutely.

Mr. SHALLENBERGER. Sometimes a man will get by, in spite of anything you can do?

Gen. GORGAS. Yes.

Mr. McKENZIE. I think it would be well for the general to put in the record the facts in relation to Camp Wheeler.

Gen. GORGAS. I will be glad to do that.

The tuberculosis examining board at Camp Wheeler reported 165 cases of pulmonary tuberculosis. Of these, 107 cases were recommended by the board for discharge and 58 cases were recommended for sanatorium treatment.

Mr. GREENE. General, is it not found by experience that when a large army is assembled, taken from the miscellaneous ranks of civil life, that there is a certain period that might be said—of course, I am using the terms of a layman—a certain period of incubation, in which certain incipient tendencies toward disease, which were not discernible upon a superficial medical examination, have every opportunity to develop, and to develop, perhaps, under the most unfavorable circumstances, because they develop in a mass of men who are trying to readjust themselves to an outdoor military life as a complete change from their comparative comforts and conveniences of civil life, and that your disease and mortality figures at the outset of the preparations for war are not fairly to be taken as standards of what may be the normal health conditions in the camps afterwards?

Gen. GORGAS. I think the history of all large armies like ours, large bodies of men brought together, is somewhat this. Say we have examined 2,000,000 men and out of that 2,000,000 we have taken in 600,000 or 700,000. Those examiners would throw out all the more evident cases of disease, and the same thing happens in the examinations made for insurance companies. Those cases are very similar.

When those men are brought to the camps, for the first few months their rate would be lower than the normal rate, and that would be expected. But very soon, from various causes, from being brought together in large numbers and because of the development of contagious and infectious diseases which begin to spread, the rate will begin to rise. That rate will be higher after that period, but it will be smaller than it was at the beginning.

Mr. GREENE. In other words, you have massed a good many men who develop some disease which may have been undiscovered at the time they were taken in, and they are now in a position to spread the disease, whereas in civil life they would have been taken care of.

The question of the lowering of the physical standard for admission to the Army is another matter I would like to ask you about, and also the statistics that are based upon the present physical standard.

I suppose we can properly assume that the fact that A, B, and C, out of a certain number of men, were rejected because they were physically disqualified by no means is to be taken to indicate that they were not healthy men. They fell off on some of the standards, but a large proportion of them, if not all of them, are likely to be normal, healthy men in civil life, and that does not indicate a dangerous stage of public health; is that true?

Gen. GORGAS. I think that is true.

Mr. GREENE. They probably have some slight deficiency in height, or discrepancy in weight, or perhaps they have some slight defect

in their eyes, but that does not indicate any serious condition of health.

Gen. GORGAS. Yes; I think that is true.

Mr. GREENE. Now, I would like to ask you a question in regard to the comparison of our Army with the Japanese Army in the Russian-Japanese War and with the German Army in the Franco-Prussian War. Are not these things taken into consideration: First, that the Japanese, by reason of their simpler life and long habit of dealing with more primitive conditions in their daily domestic and social life, more likely to be adaptable people in the field than people taken from our more highly developed social institutions, with greater physical conveniences and luxuries?

Gen. GORGAS. There may be some weight in that. When they understand what you are trying to teach them, they will willingly cooperate.

Mr. GREENE. That is appealing to the intelligence of the men after they get used to the work in the field. I am speaking of the transition period, when they start from civil life. Would you expect our people would be more easily adaptable than the Japanese, who are living under more primitive conditions?

Gen. GORGAS. I would agree to that as a general proposition. I think because of the rearing of our men they are harder to discipline than the Japanese. The latter come in as a disciplined people when they start.

Mr. GREENE. And they are used to more frugal fare and they might more easily make that transition, but you think that from the time after that appeal to the higher developed intelligence of the Americans the balance begins to show in our favor?

Gen. GORGAS. I suppose the Japanese when he comes in fares better than he does at home. They are fed better than when they are at home. Our men, as a rule, are fed better than at home.

Mr. GREENE. But the wonderful record of the Japanese is always cited to us.

Gen. GORGAS. But the principal thing in the case of the Japanese is that they were the first people in a great war who had more men killed on the field of battle than the number who died from disease; but they had a heavy death rate from disease.

Mr. GREENE. The thought occurs to me—and I would like to have your opinion about it—whether or not the people of Japan, being a people who have been accustomed to a more frugal and simple fare, and less luxurious modes of living among the masses—whether or not they would be more easily adaptable to the rigors of military camp life than people taken out of conditions under which our people live?

Gen. GORGAS. I think not. I think our people are more or less normally underfed; but I should imagine that the Japanese would be less prepared. I think they are also underfed.

Mr. MORIN. What is the Japanese death rate?

Gen. GORGAS. From 20 to 22 per thousand.

Mr. GREENE. Your health statistics, as far as the camps are concerned, often depend on the character of the campaign. For instance take the Franco-Prussian War, where the Germans made a pretty quick clean-up. There was not an opportunity for what we might call camp stagnation and the other attendant physical pull-downs that come from long periods of inactivity in close quarters. You

take those things into consideration in making estimates as to comparative health conditions?

Gen. GORGAS. Yes.

Mr. GREENE. For the present, our nine months of war ought not to be compared with the quick action of the German troops in France in 1871. We have been laboring under more depressing conditions than they were.

Gen. GORGAS. I think we can say that.

Mr. ANTHONY. When the selection of the sites for the cantonments was made was your department consulted as to the sanitary advantages or disadvantages of these sites?

Gen. GORGAS. That question did not come to my office. The sites were selected by the department commanders. The department commanders appointed boards to select the sites for the cantonments, and on each one of those boards there was a medical officer.

Mr. ANTHONY. Your department has made a subsequent investigation?

Gen. GORGAS. Yes; I have seen most of them.

Mr. ANTHONY. Is it true that some of the sites are not ideally located, from the standpoint of military sanitation?

Gen. GORGAS. All that I have seen are very good. I have made some criticisms of Camp Funston.

Mr. ANTHONY. As you know, that large cantonment is located on the flat of a river bottom, without apparent natural drainage, and I wanted to ask if it was possible for a site of that kind to be selected without the approval of the medical officer.

Gen. GORGAS. No; there was always a medical officer on the boards that selected the sites.

Mr. ANTHONY. Do you know in that particular case what the recommendations of the medical officer were as to that particular camp site?

Gen. GORGAS. No; I do not.

Mr. ANTHONY. What I want to try to do is to fix the responsibility for the location of that camp site in such an apparently disadvantageous location. You have no means of knowing what the recommendations of the medical officer were who was on the board that selected that site?

Gen. GORGAS. I could find that out for you.

Mr. ANTHONY. I wish you would find that out and put in the record the name of the medical officer who approved or disapproved that camp site, with his reasons.

Gen. GORGAS. Yes, sir. Capt. S. J. Turnbull, Medical Corps, was the medical officer on the board which recommended the site of Fort Riley, Kans., at which point Camp Funston is located.

Mr. ANTHONY. Were not some of these camps located, or at least one of them, in a region concerning which it was brought to the attention of the Secretary of War afterwards that it was located in a region of the country peculiarly susceptible to certain diseases, or where certain diseases had been prevalent?

Gen. GORGAS. As a matter of fact, Camp Funston is located in a section of the country that has, so far as spinal meningitis is concerned, a higher rate than the rest of the country. That is what I had in view in my report.

Mr. ANTHONY. Did you bring that to the attention of the Secretary of War?

Gen. GORGAS. I did, when my report came in.

Mr. ANTHONY. Was that before or after the camp was built?

Gen. GORGAS. That was after it was built. It was early in December when I was there.

Mr. ANTHONY. So far as the responsibility for the selection of these camp sites is concerned, if a report had been asked of your department, that would have been brought to the Secretary of War in time to have avoided a location such as that at Camp Funston?

Gen. GORGAS. It would have been brought to the attention of the Secretary of War. I do not think I would personally recommend that a camp be not located on that site for that reason. If there is any military advantage in locating it there, I would favor locating it there, and I would take steps to protect the men in the camp.

Mr. ANTHONY. Does spinal meningitis thrive in such a location, on a flat, where there is imperfect drainage, and which in the rainy season becomes muddy and wet?

Gen. GORGAS. No; spinal meningitis is a contact disease, and would be contracted in a way similar to the way in which measles is contracted. It would be more a question of the general condition of infectious diseases.

Mr. ANTHONY. From the standpoint of medical sanitation, is not one of the first requisites in the selection of a military camp site that there be natural drainage on the site?

Gen. GORGAS. Yes.

Mr. ANTHONY. What would have recommended the camp site where Camp Funston is located, in any way, to a medical officer who was on the board selecting that site?

Gen. GORGAS. Nothing in the camp site itself. I inquired what the probable reasons for the selection were.

Mr. ANTHONY. It is true, is it not, if the camp had been moved a mile back, a proper site could have been found, in the rolling country a mile back from the present site?

Gen. GORGAS. It would have been a very much better site.

Mr. ANTHONY. I want to try to fix the responsibility for the awful error in building that great cantonment on that river bottom, which everybody knows in time of high water completely overflows, and at times of excessive rainfall becomes impassable for any body of men, or for animals, or anything of that kind.

Gen. GORGAS. I will have to look that up. My understanding is that the department commander had charge of the selection. He was advised by this board as to the question of selection.

Mr. ANTHONY. Then he would have had authority to have gone over the recommendation of the board that originally acted in reference to the selection of the sites?

Gen. GORGAS. He had entire authority.

Mr. ANTHONY. You would not be able to tell us whether the action of the board had been followed in that case?

Gen. GORGAS. No; but I could find that out for you.

Extract from a report, dated Chicago, Ill., May 15, 1917, of a board of officers appointed to report upon available camp sites for cantonments in the fourteenth divisional area, Central Department.

"After due deliberation upon the relative advantages and disadvantages of all of the sites inspected, as well as from a consideration of many less desirable sites offered to

the board for its inspection, it is the opinion of the board that the most suitable site within the fourteenth divisional area that can be found, all features being considered, is the United States Military Reservation at Fort Leavenworth, Kans., and the board makes its recommendation accordingly.

"The board considers the site at Colorado Springs and the site at Fort Riley available and adaptable for the purpose. Of these two sites the board considers Colorado Springs preferable."

This report was signed by each member of the board. Capt. S. J. Turnbull, Medical Corps, was the medical officer of the board.

Camp Funston is located at Fort Riley, Kans.

(Old files, A. G. O. Feb. 8, 1918.)

Mr. ANTHONY. It would be interesting to put that in the hearings, because we hear so much about that, and I would like to try to fix the responsibility for the selection of that site.

Now, in reference to Camp Doniphan. Have you ever heard any complaint in regard to the water supply at Camp Doniphan?

Gen. GORGAS. I was at Camp Doniphan recently. We get reports very frequently from our inspectors. My general impression was that we heard those complaints as to the appearance and odor of the water. I saw it myself when I was there, and I heard the complaints.

Mr. ANTHONY. The men complained to me that it was offensive to wash their faces in that water.

Gen. GORGAS. I think probably that is true, at times. It is a common attribute of waters that have algae in them.

Mr. ANTHONY. It is caused by decaying vegetable matter?

Gen. GORGAS. Yes. Our water expert reported the Camp Doniphan water as being good water.

Mr. ANTHONY. So that the full responsibility for the selection of those two camps sites would be on the commanding officer of that department.

Extract from a report of a board of officers, dated Fort Sam Houston, May 24, 1917, appointed for the purpose of selecting and investigating divisional cantonments and training sites in the Southern Department.

"The following places in Oklahoma were considered and were found not suited for camp sites for the following reasons:

"1. Fort Sill.

"2. Camp Lawton.

"In the neighborhood of these places, and particularly of the reservation, are to be found the best of training sites, but the water supply at Fort Sill has failed and the maximum that Lawton can furnish is 300 gallons per day, and this is now being entirely used by Fort Sill. To insure an adequate supply of water would be required the laying of a 7-mile pipe line and other construction, which is now out of the question.

"If a site be selected in Oklahoma, the board believes that the one in the neighborhood of McAlester is the best obtainable in the State, but attention is invited to the fact that training in this locality would be interrupted by winter weather."

This report was signed by each member of the board. Maj. J. R. Shook was the medical officer on the board.

Camp Doniphan is located near Fort Sill.

(Old files, A. G. O. Feb. 8, 1918.)

FORT SAM HOUSTON, June 6, 1917.

The ADJUTANT GENERAL,
Washington.

Number 5373. Referring to Fort Sill as site for division cantonment the board of officers reported that Sill was unsuitable on account of lack of water period. This objection appears to no longer exist and Fort Sill, like Fort Worth, Waco, Dallas, Houston, and San Antonio is available as a camp site saving advantage of being on

Government land period. As compared to San Antonio it has the disadvantage of lack of storehouses, roads, distributing system of water, and sewer connection, making a difference of perhaps \$200,000.

PARKER.

Gen. GORGAS. Yes; that is my impression. I would have to look that up and see if that is correct. I know in a general way that those papers came to Washington, but my impression is that that matter was left entirely to the commanding officer of that department.

Mr. ANTHONY. Are you convinced as to the advisability of concentrating men in these very large military cantonments? Is it more advantageous to put them in that kind of cantonments than to concentrate them in smaller groups?

Gen. GORGAS. I would say, as a general proposition, the greater the segregation the better it would be from a health standpoint.

Mr. ANTHONY. Do you believe that the idea of having steam heat in a military camp is the correct idea, from a medical standpoint?

Gen. GORGAS. Yes, as a general proposition, I think it is.

Mr. ANTHONY. It has been brought to my attention that in the military camps which are not steam heated, and which have very simple conveniences, there has been almost no death rate, and very little illness, whereas, in the large steam-heated camps the death rate has been high, and the sick rate also. Has that been brought to your attention?

Gen. GORGAS. Yes, sir, but the contrary is the case. But I think that has nothing to do with the steam heat. It is a question of epidemics.

Mr. ANTHONY. I do not refer to the tented camps, General. I am referring to the wooden cantonments without the steam heat. It has been brought to my attention that they were healthier than the ones which had the steam heat.

Gen. GORGAS. I can not be positive whether in a cantonment like Camp Meade the men's barracks are heated by steam. All of our hospitals there are heated by steam, and I think the whole cantonment is heated by steam, but I am not sure about that.

Mr. ANTHONY. In reference to the matter of hospital ships, the Army has operated hospital ships in the past, has it not?

Gen. GORGAS. Yes.

Mr. ANTHONY. And a few years ago they turned over the hospital ships they possessed to the Navy, did they not?

Gen. GORGAS. Yes, after the Spanish-American War.

Mr. ANTHONY. The Army owned the *Solace* and the *Relief*?

Gen. GORGAS. The *Relief* and several others.

Mr. ANTHONY. But all the hospital ships have been transferred from the Army to the Navy?

Gen. GORGAS. They have been disposed of; I think they were transferred to the Navy.

Mr. ANTHONY. If our Army in France sees service in the field in a short time the emergency will confront you of looking after the transportation of the permanently disabled men back to this country. Have you formulated a plan yet as to how you will do that?

Gen. GORGAS. We have formulated our plans, but the question as to who is to bring them back has not been decided, whether we will do that or the Navy.

Mr. ANTHONY. It is still a disputed question whether the Army or the Navy shall undertake that?

Gen. GORGAS. Yes.

Mr. ANTHONY. Would it not be advisable to have a matter like that settled now?

Gen. GORGAS. I think it is very necessary to settle it as soon as possible.

Mr. ANTHONY. Where is that matter pending now?

Gen. GORGAS. The matter is pending between the two departments. I saw the paper this morning that came back to me, but I have not had time to read it to see what was the final decision.

Mr. ANTHONY. What was your recommendation, that the hospital ships be operated by the Army under the control of your corps?

Gen. GORGAS. As far as I am concerned, that would be my recommendation.

Mr. ANTHONY. And it has been your recommendation?

Gen. GORGAS. Yes.

The CHAIRMAN. General, I have been asked a good many times just exactly what is the Sanitary Corps. What is the difference between the Sanitary Corps and the Medical Department proper, and how is the Sanitary Corps organized?

Gen. GORGAS. The Sanitary Corps is one of the divisions of the Medical Department. When the question came up of getting these men for these ambulance companies to go to France, we pointed out that the only means we had for commissioning people was to put them in the Medical Corps, and a man to get a commission in the Medical Corps had to be an M. D. Under the draft act passed last year the President had authority to authorize other corps.

THE CHAIRMAN. You mean the Sanitary Corps was organized under that section of the draft act providing for the organization of special and technical troops?

Gen. GORGAS. Yes. The President then issued two orders, one making a separate organization for the Ambulance Service, and then we asked for another organization for the Sanitary Corps, in which we could get anybody who was necessary for our work. What we wanted principally at that time were sanitary engineers for drainage work in connection with the operations against mosquitoes.

But the principal expansion of that corps comes from the use of the men in the gas-mask work. We have more men in the gas section than any other. It was authorized and is used by us to get in men of that sort.

The CHAIRMAN. What is the strength of the corps; how many officers are there in the corps and what is their rank?

Gen. GORGAS. We are allowed about 1,300 officers in that corps, and the grade of major is the highest grade. I do not think we have any higher grade than that in the Sanitary Corps, but I will get you those details and put them in the record. Majors, 25; captains, 134; first lieutenants, 563; total now in service, 722.

The CHAIRMAN. You say there are about 1,300 officers allowed in the Sanitary Corps?

Gen. GORGAS. Yes; one per thousand.

The CHAIRMAN. How many men?

Gen. GORGAS. About 4,000 enlisted men; that is, specified in numbers. We have not enlisted very many men so far—only 600.

The CHAIRMAN. General, have you in your department any other organization of special or technical troops?

Gen. GORGAS. We have the Veterinary Corps.

The CHAIRMAN. As provided for by law?

Gen. GORGAS. Yes; that is provided for by law.

The CHAIRMAN. I mean any organization of such troops, organized under the provisions of the act of May 18, 1917.

Gen. GORGAS. No; I think those are the only two organizations.

The CHAIRMAN. The Sanitary Corps and the Ambulance Corps?

Gen. GORGAS. Yes.

Mr. CALDWELL. General, did you personally inspect the hospital at Camp Mills, on Long Island?

Gen. GORGAS. Yes.

Mr. CALDWELL. Under whose supervision was that hospital erected?

Gen. GORGAS. It was erected on a requisition from our department, as other hospitals are, and was put up by the Quartermaster General's Department, but it was a very temporary affair, and just a few rough board buildings when I was there.

Mr. CALDWELL. Generally described, the buildings are just long sheds, closed in on either side, with windows and a door, without any porch in front, or any means of anyone getting from one room to another without going outside and around?

Gen. GORGAS. That was true.

Mr. CALDWELL. You saw that that whole camp was set in the center of a truck farming district, where they use stable manure for a fertilizer?

Gen. GORGAS. I saw where it was located.

Mr. CALDWELL. And you saw that billions of flies were swarming all over the whole place?

Gen. GORGAS. I would have to look at my report to see about that.

Mr. CALDWELL. Flies are germ carriers, are they not?

Gen. GORGAS. To a considerable extent.

Mr. CALDWELL. How did it happen that all the officers' quarters were fully screened with copper wire screens and that the hospital did not have a screen in it?

Gen. GORGAS. I could not say about that. Did you see it?

Mr. CALDWELL. I was there and talked with the medical officer and asked him how it happened, and he said he had requisitioned screens, but none had come.

Gen. GORGAS. It was under my supervision, but in the case of any hospital, the camp commander is the supreme officer. It would be our business to see that the things were there.

Mr. SHALLENBERGER. That was a National Guard camp?

Gen. GORGAS. Yes.

Mr. CALDWELL. Is it not a fact that practically every National Guard camp has fewer hospital facilities than any of the other camps?

Gen. GORGAS. No; I think not. I think the hospitals are all the same size, irrespective of where they are located.

Mr. CALDWELL. At the time I was complaining of, and when I talked to the medical officers there in relation to the conditions at that hospital, there were two hospitals built within a mile of it at

the flying field, both of which were fully screened and both of which had entrance halls, and places where the nurses could go from one room to another without having to go outside.

Gen. GORGAS. That was the case with all camps looked upon as being permanent camps. They all had permanent hospitals built from the beginning.

Mr. CALDWELL. You know, do you not, that Camp Mills was designed as an embarkation depot, a point to which men were going to be sent, who were going abroad?

Gen. GORGAS. I would have to look that up and see what the intention was.

Mr. CALDWELL. Did you examine the condition of the water supply there?

Gen. GORGAS. Yes.

Mr. CALDWELL. Do you know how deep the water pipes were put under the ground there?

Gen. GORGAS. I do not recollect, but I can furnish you that information, as far as our office is concerned. In some places pipes were only one foot deep, while in other places, two feet. Around the bath house risers were unprotected from frost.

Mr. CALDWELL. Was it ever called to your attention that the water pipes were only two feet underground, and that the frost went down four feet eight inches under ground there?

Gen. GORGAS. That may be so; I would have to look that up to be sure about it.

Mr. CALDWELL. Did you have anything to do with the selection of the site in a case where you knew it was located on a low, level, sloppy section of land?

Gen. GORGAS. When I was there last, it appeared to be fairly dry.

Mr. CALDWELL. Did you see it during the rainy season?

Gen. GORGAS. No; it was dry when I was there.

Mr. CALDWELL. Was your sanitary squad called upon in the matter of draining that sort of ground?

Gen. GORGAS. The way the drainage is done, our sanitary officers recommend it, and the quartermaster does the work.

Mr. CALDWELL. In locating a site, do you think it ought to be on a level stretch of ground, the same distance from the railroad and water, or other transportation facilities, if you can secure a site on rolling ground, or would you put it on the level ground?

Gen. GORGAS. Leaving out the military consideration for the selection of the site, and considering it from the sanitary site, I should say it should be on the rolling ground.

Mr. CALDWELL. Can you think of any particular reason, other than that this site was near to the Garden City Hotel, why this site should be selected, when just a mile away was a beautiful site, on rolling ground?

The CHAIRMAN. Gen. Gorgas says he had nothing to do with the selection of the site.

Mr. LUNN. If your Sanitary Corps recommends certain drainage work to be done, then it is up to the Quartermaster's Department to carry that out?

Gen. GORGAS. Yes.

Mr. LUNN. Suppose they do not do it. The point I am getting at is as to the authority, whether the ultimate authority to get that done rests with you, and whether you can go ahead and do that work, or whether you can be checkmated by the military authority on sanitary matters.

Gen. GORGAS. It is the business of the chief surgeon to let the commanding general know about it. If he does not carry it out, then the monthly sanitary inspection report comes to me, and I deal with it in this way: I have inspectors in my office, and they would make a report to me in regard to that camp, independently. If I think the things recommended ought to be done, then I send this recommendation to the Chief of Staff, that this particular camp is not properly drained, and then the Chief of Staff asks the division commander why it is not done.

Mr. LUNN. Let me put it another way. Suppose your men go through a camp, and there are certain things in the camp which they do not like, have they the authority to say this thing must be changed, or has the military commander authority to decide whether or not they shall be changed? Has he the authority to say they shall not be changed if he does not want them, it does not make any difference what you want?

Gen. GORGAS. There is no authority outside of the military authority in the Army for things of that kind.

Mr. LUNN. If the question did become acute, you would be powerless if the military authority did not agree with you?

Gen. GORGAS. Yes.

Mr. LUNN. Do you think that is wise?

Gen. GORGAS. In just such a thing it would be much better if I had the authority to go into a camp and order certain things done, but from a military point of view you see what bad business that might be. For instance, take it in France, you can see how bad it would be for a medical officer, if he should go into the trenches and find a battalion half dead from all sorts of diseases, if he had the authority to say, "You move that battalion back," and the commander had to do that.

In Army life, at least, at the present time, we are to fight, and we have to whip the Germans, and everything has to be secondary to that. The medical officer ought to have some good reasons for wanting to have anything done.

When I make these reports these things ought to be done by the division commander, if the Chief of Staff believes in me.

I do not believe in any military machine it would be feasible or advisable to give the medical officers such authority as you suggest. Would you suggest that it would be advisable in the case I cited?

Mr. LUNN. I would not go so far as to take into consideration the actual fighting situation. But in these camps, if you were to go into camp, and there are certain conditions there that you do not think are right, my point was whether you have the authority to change them, if there was a division of opinion between the Medical Department and the division commander?

Gen. GORGAS. No; I have not the authority to change them.

Mr. LUNN. It seems to me that in reference to medical matters in permanent or semipermanent camps your word ought to be final so far as questions of health are concerned.

Gen. GORGAS. You see the difficulty that even that would involve. Suppose I should make various recommendations that I think ought to be carried out, on my say so. I did make some recommendations. I would have built the permanent hospitals and put steam heat in all cantonments and I would have kept the troops out; I would have said, do not let the men go in there until the hospitals is finished. I would have advised against it, and if I had had entire power would have probably carried that into effect.

Mr. LUNN. Of course, it might be because of certain things you do not know about in military strategy the men must go there, if they can take care of them. But the question is whether there has arisen any serious diversion of opinion where your opinion might be overruled disadvantageously. I am not particularly interested in the theoretical side of it, but I was interested in knowing whether such a situation as that has arisen.

Gen. GORGAS. I suppose these questions must have been discussed, and I presume my suggestions were turned down for good reasons, such as I spoke of.

You might take, for instance, the question that came up on yesterday in regard to a laundry at Camp Doniphan. When I was out there the building was finished, but the machinery was not in. It would have been a very good scheme in that particular case if I had had the authority to say, go ahead and put in the machinery; it is very much needed. But how you are going to define that authority, I do not know.

Mr. LUNN. Is it not a subject deserving of study, to the end that there might be certain changes brought about by legislation?

Gen. GORGAS. I think so. If I could change it as I want to, I would get up some scheme so that a responsible authority, either the Chief of Staff or the Secretary of War, would act within a reasonable time upon my recommendations, so that I could know what to do, in the case, for instance, of the suggestions I have made about these camps, suggesting that the troops must not go in there until the camps are finished. It seems to me the machinery might be improved if we had some scheme so that within a week such a recommendation could get back to me, so that I could see what the position of the higher authority was without unnecessary delay. If a scheme could be brought about so that we could get prompt action on our recommendations, I think it would be a very good thing.

Mr. TILSON. Do you not think in a big industrial concern outside of the Government, instead of having a report which would take a month to get around and be effective, that they would instantly recall the men in charge of that work by telephone, and say "what about this," and settle that matter immediately, before the thing went any further; and do you not think if we could cut loose from a lot of this report writing, and the writing of indorsements, and the action upon indorsements, and could handle the matter just as they do in a big industrial concern, where one man goes to another and settles the matter at once, we would get better results and get them more quickly?

Gen. GORGAS. If it could be done.

Mr. TILSON. Why can it not be done, even if it is not quite so accurate, and even if there were a few slips made now and then; in the long run, would it not be a much better system?

Gen. GORGAS. That strikes me as being utterly impracticable and out of the question. If you were only dealing with one camp, it would be all right. How is any official like the Chief of Staff to deal with 58 camps in that way? There would probably be coming from these camps some recommendations in regard to which machinery much lower down than the Chief of Staff can be used for getting action. I do not see how such a scheme could be made effective. How would you propose to do it?

Mr. TILSON. I would have a method somewhere between the method I have suggested, and the long roundabout methods that are now in existence, and I think I would cut it down as much as possible, and I would get the information in a more expeditious way.

Mr. GREENE. The bane of the practice is summed up in the words "through military channels." It passes through too many men.

Mr. GORDON. It appears that when the men in the last increment were called into service in November and December, the Chief of Staff was in possession of a notice from the Quartermaster General that he, the Quartermaster General, would be unable to clothe those men until the 31st of December. Was the Medical Department consulted as to the effect upon the men of calling them into these cantonments without sufficient clothing and blankets for them?

Gen. GORGAS. It was not.

Mr. GORDON. What was the effect on the men who were called in and not given clothing, but simply supplied with these blue cotton jumpers in lieu of uniforms and blankets?

Gen. GORGAS. A great deal of discomfort, I think, was caused by that, but I am not prepared to say that it has any marked effect upon the health of the men.

Mr. GORDON. Do you not think it added materially to the cases of disease?

Gen. GORGAS. I am inclined to think not.

Mr. GORDON. The weather was extremely cold in the month of December in most of these camps, was it not?

Gen. GORGAS. Yes.

Mr. GORDON. Would not the fact that the men were not adequately clothed have rendered them more susceptible to pneumonia and other diseases?

Gen. GORGAS. That is a very general belief. I am not prepared to say that I am in accord with that general belief. I have seen the severest epidemics of pneumonia that I have ever had to deal with in the tropics. I may add that pneumonia and measles are spread by contact.

Mr. GORDON. Do your statistics of the diseases in these different camps show a larger proportion of men on the sick list in the camps where inadequate blankets and clothing were furnished than in the other camps?

Gen. GORGAS. They do.

Mr. GORDON. They show a larger proportion?

Gen. GORGAS. Yes; I am speaking in general terms.

Mr. GORDON. If that is true, would not that be rather convincing evidence that the inadequacy of the clothing provided for these men was the direct cause of these diseases?

Gen. GORGAS. I think not; I think that is due to other causes.

Mr. GORDON. You think other causes contributed to that?

Gen. GORGAS. Yes.

Mr. GORDON. What other causes were they. Are you prepared to say that?

Gen. GORGAS. Yes; I think the greatest cause was the fact that in these camps which have been so much affected there were among the troops there a much larger proportion of people who had not had measles, that they came from the southern and more sparsely settled parts of the country, and those men had not had the measles. When they were brought into the camps, the measles spread. If you have a thousand cases of measles, you would have a considerable number of cases of pneumonia.

In the other camps, in which there were not so many cases of measles, the men came mostly from the large cities, and those men had had measles before they went to the camp. Our figures would rather prove that than the other as being the principal cause.

Probably the post which has had the largest number of measles cases is Camp Wheeler, where they had about 3,000 cases, which was one-tenth of the total number of men in the command. That is, there were about 30,000 men in Camp Wheeler, and about 3,000 of those men had measles. They were the southern troops, some of them from my State, and others from Florida and Georgia.

At Spartanburg, where the troops were from New York, there were very few cases of measles, not more than 300 cases altogether. Camp Wheeler is also one of the camps where they had the largest number of pneumonia cases, whereas, there were comparatively few at Spartanburg. That is what our figures would bear out, in general terms.

Mr. GORDON. Is it not also true that men coming from the southern part of the country would be apt to suffer more from exposure as a result of inadequate clothing than men coming from northern latitudes?

Gen. GORGAS. They might, if they had less clothing on. My personal experience does not bear that out. In my 20 years in the tropics, I did not feel any personal discomfort during the first winter after I got back to the more northern climate; I did not suffer from the cold in the United States, and I do not think the men, as a general rule, feel particularly the cold, when they come north from the south, but I could not give you any statistics on that subject. I do not think my opinion on that subject is worth very much. It is worth no more than yours would be on a subject of that kind.

Mr. GORDON. It would seem to me that men coming from the southern part of the country, and especially where they are sent to a latitude north of where they have been accustomed to living, would suffer more from the cold, with the same amount of clothing, than men coming from northern latitudes.

Gen. GORGAS. That may be. Our experience in the Spanish-American war would not bear that out. You may remember that a great many men were sent to Florida in order that they might be acclimated, but when they got to Cuba, they were the worst used up men that you could imagine. And the men who were sent direct from New York to Santiago were in very much better shape than the men who were sent to Santiago from Tampa, Fla. The men who were sent to Tampa became infected with malaria. Personally, I do not believe that climate has much to do with disease.

Mr. TILSON. General, is it customary to perform autopsies on the bodies of soldiers who die in our camps?

Gen. GORGAS. We do that wherever we can. I think that is the general custom.

Mr. TILSON. If an autopsy is performed, is it in accordance with your regulations that the body should be again prepared in as nearly a normal state as possible?

Gen. GORGAS. Yes.

Mr. TILSON. We heard the other day in a speech in the Senate an illustration of a case in which it seemed there had been an autopsy performed, and then the body had been left without any care at all, without even wiping the blood from the man's face. Do you understand that to be just an isolated case?

Gen. GORGAS. Am I expressing just my personal opinion now?

Mr. TILSON. If you have any official facts, we would like to have the information, because this case and others like it are brought to our attention, and if you can give us any information in regard to it, we would like to have it.

Gen. GORGAS. I will get the facts in that particular case.

(The name of man, camp, and other details we found unavailable and it is impossible to secure the facts asked for.)

What is generally done is this: The autopsy, if performed, is done with the permission of the friends of the men or some responsible person. That permission is obtained before the autopsy is performed.

Mr. SHALLENBERGER. Is that the rule; should that always be done?

Gen. GORGAS. Yes, that is the rule.

Mr. TILSON. It happened that within 30 minutes of the time when Senator Chamberlain referred to this particular case, a member of the House, coming from a part of the country different from where this case is supposed to have occurred, told me of an exactly similar case, with the exception that in the case of one man there was a cloth thrown over the corpse, and in the other case not even a cloth was thrown over it. The second case was in an entirely different camp. That is the reason I ask whether it was common for these autopsies to be performed, and if so, what are the requirements of the regulations after the autopsy is performed, in regard to the care and disposition of the body?

Gen. GORGAS. The requirement is that the officer in charge of the hospital is responsible for the man's body, and he should see that the body is decently prepared, clothed in the man's uniform before it is finally shipped, and then he calls upon the quartermaster to have the body embalmed and shipped. But it is the duty of the officer in charge to see that everything is decent and in order.

The CHAIRMAN. You mean the doctor gives the order, and it is actually executed by the Quartermaster's Department?

Gen. GORGAS. The order for the embalming: yes.

The CHAIRMAN. The execution of the order is in the hands of the Quartermaster's Department?

Gen. GORGAS. Yes.

The CHAIRMAN. So that in the case of a failure to obey the orders, the Quartermaster's Department would be responsible?

Gen. GORGAS. It was the duty of the commanding officer in the case Senator Chamberlain referred to, when the body was ready for ship-

ment, to have somebody see that it was decently prepared and properly shipped.

The CHAIRMAN. It was his duty to see that the Quartermaster's Department had executed the order properly?

Gen. GORGAS. Yes.

Mr. LUNN. May I ask whether, in the case of a body being sent back to the parents of the deceased soldier, the expense is borne by the War Department, or is it, as one newspaper has said, sent C. O. D.?

Gen. GORGAS. The expense is borne by the Government. I have investigated many cases where undertakers at the camp notified friends of the death and got an order to take charge of and ship the body. The friends do not know that the Government is going to do it and the undertaker gets authority from friends to take charge of the body and ship it.

Mr. LUNN. Possibly you saw the story of the case of a poor family, where the body of a soldier belonging to that family was shipped, and there were \$45 charges on it, and the resident undertaker paid the charges for those people.

Gen. GORGAS. I saw that.

Mr. TILSON. I would like to ask you a question in reference to the overheating. You have testified that you do not believe the matter of cold or exposure has had much to do with the cases of disease. Can you say with the same regard to overheating of the buildings at the National Army camps?

Gen. GORGAS. I think overheating is objectionable. I do not think, however, that overheating has had much to do with the high percentage of pneumonia cases.

Mr. TILSON. I have been at Camp Devens on two different occasions, and it happened to be fairly warm weather for that time of the year, late in November, and in both cases every building I went into was so roasting hot that you could hardly endure it. I should say the thermometer was not less than 100 degrees in every building I went into, and there was no possibility of shutting the steam off. There were no valves on the radiators, and there was no way of shutting the steam off, and every building there—I was in all of them—had the windows wide open. It would not have been comfortable without any heat, but it was a comparatively warm day and the temperature in those buildings was simply roasting, in every building I went in, and I was there twice.

Mr. LUNN. You mean that there were no valves on the radiators, so that you could regulate the heat at the radiators?

Mr. TILSON. There were no valves, except the main valve at the heating plant. The heat could not be turned off unless it was all turned off.

Mr. OLNEY. In the case of men with measles, they succumb quite easily to pneumonia, do they not?

Gen. GORGAS. Yes.

Mr. OLNEY. I have heard it said that the camp doctors are, in a large measure, responsible for the great number of pneumonia cases because they do not allow the patients to sufficiently convalesce from measles, so that they easily take pneumonia. Should it not be a part of the duties of the camp physicians to see that the men with the measles are properly taken care of, and that they are thoroughly

recovered before they are allowed to go about, so that they will not be so susceptible to pneumonia?

Gen. GORGAS. We have sent around notices that the men with measles should not be returned to duty within less than two weeks, and there is nothing in our figures to show that we have a greater proportion of measles to pneumonia than ordinarily. It has not been a very great factor, so far as the proportion of the cases of pneumonia is concerned.

Mr. OLNEY. I would like to mention an isolated case, and the story about these isolated cases is disseminated quite broadly.

This is a case that came to my attention, where a patient had a severe cold and was given a cot without any mattress. They said the mattresses had all been shipped abroad, and this man slept on a thin blanket thrown over a single spring bed or cot. This man was finally sent to the Walter Reed Hospital and died of scarlet fever about 10 days ago, about 20 minutes of 4, one afternoon. Has the demand for this kind of supplies been met at the camps; that is, for mattresses and other furnishings of the bed?

Gen. GORGAS. Yes. There has been no lack of those supplies, even at Camp Meade. I would like to get hold of that case and see why that man did not have a mattress. As far as we know, there are plenty of those supplies on hand.

Mr. OLNEY. That man's body was shipped to Boston, apparently, by the paying of an extra fare. That was done through the undertaker. Will that man's family be remitted the amount of that fare?

Gen. GORGAS. The Quartermaster's Department, I understand, allows \$75 for the shipment of the body. I can get that information for you. That is a detail which is in the hands of the Quartermaster's Department, which has charge of the shipping of the bodies. I expect, if there was some mistake, the amount would be refunded. They probably gave the undertaker authority to take the body.

Mr. OLNEY. The family will be remitted that amount in due time, I suppose?

Gen. GORGAS. I presume so. I will be glad to look that up.

The bodies of deceased soldiers are returned to their homes at the expense of the Government. Should the body of a deceased soldier be sent home "charges collect," this would be an error and when reported to the Quartermaster General's Department would be promptly and thoroughly investigated and the family reimbursed for the amount of the charges paid.

Mr. OLNEY. The undertaker, as a matter of fact, charged the family \$240. I think particular attention has been called to that case.

Mr. HULL. What is the attitude of your department toward the organization of the Purple Cross, to attend to the bodies of these men after death?

Gen. GORGAS. I should be delighted to turn the bodies over to them. I think it would be a very good thing.

Mr. HULL. You say the Quartermaster General's Department attends to it. Do they have an organization to attend to it?

Gen. GORGAS. They have several organizations of undertakers in their department, but as a general rule, this is done by contract with the local undertaker at the various camps.

Mr. HULL. You really would be in favor of recommending some sort of an organization like the Purple Cross?

Gen. GORGAS. I have passed adversely on that proposition, but that was because it was brought to me in this way:

An apparently very well educated man came into my office one day. I do not think I ever heard a more interesting talker. He outlined a plan of undertakers for the department, and the ground he took was this, that it would probably do more to whip the Germans than anything else the Government could do—that if a man knew that his body was going to be taken care of in this fine fashion, no man would object to being killed. He actually used that argument with me, and he submitted a scheme that provided for a major general who was to be the chief undertaker, and six brigadier generals, with an organization bigger than our Medical Corps. That was the proposition which was put to me.

Mr. HULL. This organization would be sort of independent of the Army, organized and operating along the lines of the Red Cross; is that not true?

Gen. GORGAS. This proposition brought to me provided that the undertakers' organization would be a part of the Medical Department.

Mr. HULL. Which do you think would be the better, to have the organization in the Army, or to have it independent, as the Red Cross is?

Gen. GORGAS. I would think from what I know it would be better to have it in the Army. It would have to be everywhere, so that it would be accessible when needed.

Mr. HULL. It would be possible, would it not, if you were given authority, to organize such a department in your organization?

Gen. GORGAS. Yes.

Mr. HULL. You think that would be desirable?

Gen. GORGAS. I do not think it would be desirable to commission the men in such an organization.

Mr. HULL. I do not care about that. You are opposed to the pharmacists having commissions. What do you pay the pharmacists?

Gen. GORGAS. The pharmacist is usually a master hospital sergeant and gets \$125 a month.

Mr. HULL. That is almost as much as he would get if he were commissioned?

Gen. GORGAS. Yes. He only gets \$75 in money, but his allowances make what he gets from his position equivalent to about \$125 a month.

Mr. HULL. It has come to my notice that in the matter of the selection of the aviators it is very hard to pass the examination. I know of one case in particular in which it seemed to me that they were too technical. That comes under the supervision of your department, does it not?

Gen. GORGAS. You mean the physical examination?

Mr. HULL. The physical examination.

Gen. GORGAS. Yes.

Mr. HULL. What is your opinion in regard to that, General? Do you think it is too technical?

Gen. GORGAS. The examination was established on my recommendation. I got the leading men in the country together on the subject. The Aviation Corps themselves were very particular about the examination, especially in regard to the eyes. The matter of equilibrium depends so much upon the eyes that the examination in that particular was very rigid.

Mr. HULL. Is it not possible that because of the fact that the examination is so rigid you are losing a number of good fliers and are taking in others? It is very hard to get into the Aviation Corps, and where we get hold of an extraordinarily good man, who is only lacking a slight shade of a point in the eye test, is it not possible that that man ought to be accepted, on the basis of his other qualifications?

Gen. GORGAS. Yes; and if such a man should be rejected by us and the Chief Signal Officer will say "That is all right; we do not question your examination, but this man has been a flier in England or France for two years and we know he can fly all right," if that was said to me I would waive the examination on that point. I think it is better to do it that way than to lower the standard.

Mr. HULL. I have heard a great deal of complaint about people being taken into the Army without a proper examination. I have heard of a case where it was claimed that a man was taken into the Army through the draft who had a wooden leg. Was that possible?

Gen. GORGAS. I do not think that is possible. Suppose the Chief Signal Officer should say that this one-legged man was an excellent flier. If he wanted him in the Aviation Corps, and if he came to me and said that, I would waive that part of the examination.

Mr. HULL. Are there any women physicians on the examining boards?

Gen. GORGAS. I do not think there are; none that I know of.

Mr. HULL. It would be impossible for them to get on those boards, would it not?

Gen. GORGAS. Under the present law we can take them into the Army as contract surgeons. We are taking them in now as contract surgeons and assigning them to hospitals.

Mr. HULL. Would they be allowed to examine a soldier?

Gen. GORGAS. No. They come in for special purposes. There is no regulation against it, but it would not come about, as a matter of fact.

May I refer to a matter which was brought up yesterday?

The CHAIRMAN. Yes.

Gen. GORGAS. It was called to my attention that I had testified yesterday that in the Medical Reserve Corps we would accept a man who had a venereal disease. What I had in mind, if I said that, was in regard to the draft, that we do not reject men who have a venereal disease.

Mr. SHALLENBERGER. I asked you if you took commissioned officers in who had a venereal disease, and you said you did.

Gen. GORGAS. Referring to the medical officers?

Mr. SHALLENBERGER. I mean any man who applies for and takes a commission. Do you take him if he has a venereal disease?

Gen. GORGAS. I would have to look that up, but my impression is that we would reject a man in the training camps for that reason.

Reject extraversion of the bladder, distinct hermaphrodites, and registrants whose penis has been totally destroyed by operation or disease.

Accept all cases with no signs of disease of the genito-urinary organs, all acute and chronic cases of gonorrhea and syphilis who have no complications permanently incapacitating.

Mr. SHALLENBERGER. You refer to the men in the training camps. Suppose a man came in directly from civil life, and he was about to be commissioned as an expert, and had a venereal disease. Would you take him?

Gen. GORGAS. I think not.

Mr. MORIN. You fix the physical requirements for men taken into the Army, that is, the enlisted men?

Gen. GORGAS. We really do it. We send the requirements to the Secretary of War, and he approves them.

Mr. MORIN. Is there any difference between the physical requirements in the case of men who volunteer and those who are taken in by the draft boards?

Gen. GORGAS. I think there is a considerable difference in that. I will put that in the record.

General Orders, No. 66, issued April 18, 1910, will show the standards by which volunteers for the Regular Army were physically examined. Selective Service Regulations, Form 999, will show the standards by which men taken in the selective draft were physically examined. Applicants for the Regular Army and men taken in the selective draft will hereafter be physically examined according to the standards laid down in C. S. S. R. No. 3, issued from the Provost Marshal General's Office, Washington, D. C., January 28, 1918.

Mr. MORIN. Then you think they do take men into the National Army through the draft boards who are rejected by the Regular Army recruiting officers?

Gen. GORGAS. No; the draft board has no authority to take them into the Army. They have to be examined by our men.

Mr. MORIN. I have had men come to me who tried to enlist in the Regular Army, and who were turned down because of some physical defect, such as some slight irregularity in connection with their eyes, and then have been taken into the draft Army and gone into the camps. They have protested against that because they did not want to be drafted, but wanted to get into the Army through voluntary enlistment, but I never was able to get them transferred, although I made a number of efforts to do so.

Gen. GORGAS. A good many things of that kind occur. It is very often due to the personal equation of the examiner.

Mr. MORIN. Do you approve the practice? Do you think a draft board should take men into the Army who have been rejected by the Regular Army recruiting officers?

Gen. GORGAS. I should think they should be on the lookout for that. But, of course, in such a very large number of cases individual instances of that kind occur.

Mr. TILSON. Should not a man be given some sort of a certificate when he fails on the physical examination and is thrown out? Should he not be given some sort of a certificate that would protect him from being drawn into the draft immediately afterwards?

Gen. GORGAS. That would not necessarily protect him from the draft. It would call the attention of the examiners to the fact. I suppose he could get that from the man who examined him.

Mr. GORDON. The difficulty is that there are two different jurisdictions. You have a local draft board that passes on the claims for

exemption under the draft rules, and when a man voluntarily enlists in the Army or Navy the recruiting officer determines whether or not he will be accepted or rejected. In one case you have one authority and in the other case you have another authority.

Gen. GORGAS. But eventually he is submitted to our authority. Nobody gets into the National Army without passing an examination given by our men.

Mr. GORDON. You mean as far as his physical condition is concerned?

Gen. GORGAS. Yes.

Mr. MORIN. Why do they reject men who have been operated on for appendicitis, if they are in good health, and who appear to be in better condition following the operation than they were before?

Gen. GORGAS. As a rule, that ought not to be a cause for rejection. But it frequently happens that a man who has been operated on for appendicitis has a little hernia in the scar.

Mr. MORIN. I have had a good many men come to me, and some of them perform hard work in the mills in the city in which I live, and still they say that they have been refused enlistment in the Army, although they are much stronger since they were operated on than they were before.

Gen. GORGAS. A man should not be rejected for that cause.

Mr. MORIN. But do they accept men in the Army who have hernia?

Gen. GORGAS. If, in the opinion of the examining doctor, the man can be operated on, and be relieved of the hernia, and is willing to be operated on, generally we tell him to go and be operated on and come back. Probably in the next draft no man will be excused because he has hernia who the examining surgeon says can be operated upon and thus be made fit.

Mr. MORIN. There is an impression which has gone over the country that in the next draft the War Department is going to accept men and take them into the National Army who do not come up to the physical requirements, and who are defective to some extent, for the purpose of using them in some of the noncombatant positions in the Army? Is that correct?

Gen. GORGAS. We are going to propose that to the Secretary of War, and we are drawing up regulations for that purpose now.

Mr. MORIN. To what extent will that be done?

Gen. GORGAS. I think that will be done in the case of any man who may be useful.

Mr. MORIN. If, in the opinion of the examining physician, he can perform any useful duties?

Gen. GORGAS. Yes.

Mr. MORIN. Can you put into the record the rate of deaths from disease in the armies now in the field in Europe, both of our opponents and our allies?

Gen. GORGAS. I do not think we can get any data on that at all, as yet. We are trying to get that.

Mr. MORIN. I think that would be very valuable.

Gen. GORGAS. I do not believe we can get a better record from them than the Japanese had.

Mr. MORIN. I think that will be a question that will be asked on the floor of the House. What is the death rate of the armies in the field?

Gen. GORGAS. I will do the best I can to get that for you. I have officers in both the French and English armies in my office, asking for that data.

Annual death rate (disease only) all troops in United States, September 21 to February 8, 1918, 8.7 per 1,000. Similar figures are not available to the Surgeon General for the French and English armies.

Mr. MORIN. In the camps, when they find men who are flat-footed, do they discharge them at once, or is it the rule to put them under observation to see if that defect can be corrected?

Gen. GORGAS. They should be kept under observation, and we are now establishing camps, where the men will be kept under the observation of an orthopedist, who will take care of the men troubled with flat feet. Those men will be given proper exercises to correct that, and they will be put in shape so they can perform duty. The orthopedist will bring such a man up to a condition where he can do all of the work of a soldier. We are establishing camps with that in view and the men who are recommended for discharge because of flat feet will be sent to one of those camps.

Mr. MORIN. But when his case is found to be hopeless, he will be discharged?

Gen. GORGAS. Yes.

Mr. MORIN. That same rule applies to men who might have defective hearts, that they will be cared for and kept under observation until it is found whether they can be cured?

Gen. GORGAS. A man with an irritable heart, who is not able to do duty, can be trained so that he will be all right. All those things are accentuated where there are large numbers of men, under tremendous strain, suddenly brought on. If all of that strain is brought on gradually, there are hundreds of men who can be brought around, so that they can perform duty.

Mr. MORIN. Then the men who have been rejected in the previous draft on account of defective eyes may be accepted this time?

Gen. GORGAS. We are going to call them.

Mr. MORIN. I know of some cases of men who have been rejected for bad eyes.

Gen. GORGAS. If we can use them——

Mr. MORIN (interposing). They may be accepted this time, if you think they would be useful in any capacity?

Gen. GORGAS. Yes.

Mr. OLNEY. I brought to the attention of your department some time ago the sawdust filled and cork filled shoes, and I understand the rules and regulations have been changed so that we have now a flat pigskin. Those shoes which were made on the original standard would be injurious to the soldier, would they not? They were fastened on by glue to the sole, and the heat from the man's foot, when he wears the shoe would cause that to go into a lump and hurt his foot.

Gen. GORGAS. Our orthopedic section made recommendations on that subject. I can put in the record just what they did recommend.

Mr. OLNEY. I would be glad to have you do that.

(Following was submitted.)

Original specifications called for a cork filling. Each man is supposed to take in his kit a pair of half soles and the necessary implements and materials are in the regular regimental outfit so that this half sole may be applied when necessary. There

has been no recommendation by the orthopedic department or by any other department, as far as can be determined, for the use of sawdust as filler, nor would it meet the approval of the orthopedic section.

Mr. HULL. I would like to ask Maj. Dewey a question in regard to the gas masks. Do you know whether there are any patents on that gas mask?

Maj. DEWEY. There is no patent at all on the gas mask. The mask follows so closely along the lines of the British mask that there has not been anything patented about it. One of the concerns with whom we are now dealing has devised a very interesting, and what we hope to be a superior mechanism for the insertion of the eyepiece, and I believe they are planning to take out patents on that, but if they do it will be with the distinct understanding that the Government will have absolute freedom to use the patent during the war, even to the extent, if we want to do so, of dealing with other people.

Mr. HULL. That is without cost?

Maj. DEWEY. Without cost.

Mr. HULL. Has your department taken up the matter in such a way that we are protected against somebody getting a patent on the very thing we are using?

Maj. DEWEY. I think we are amply protected. The conditions are such that, as I understand it, we can go ahead and manufacture.

Mr. HULL. I do not think there is a bit of doubt about it, but there are always a lot of fellows watching these things and they will go out and get a patent and persuade some commission that they have a good patent, and then the Government pays for it. That is the way it occurs to me.

Maj. DEWEY. I understand in that connection that a man has no rights until he has made a claim, and we have no people who have made a claim against us for anything of that kind.

Mr. TILSON. Along that very line, are you making preparations to have every man supplied with a gas mask, so that in case the enemy should drop these gas containers from air bombs, having gained a superiority in some particular place by sending over a large number of airplanes, and drop containers of poisonous gases at a considerable distance from the front line—have you made preparations to protect the men in the rear from such an attack?

Maj. DEWEY. We are making plans to have in France not only enough masks for every man, but also a very large reserve, to take care of any emergencies.

Mr. TILSON. No matter how far back from the front line a man may be?

Maj. DEWEY. The question of where a man will wear his mask is a question for the division commander, or for the higher military authority to decide.

Mr. TILSON. Do you know whether there have been any such bombs dropped from aeroplanes yet?

Maj. DEWEY. Up to this time the consensus of military opinion has been that, so far as the airplane bombs are concerned, there would not be enough of them in one place to make it worth while.

Mr. TILSON. The high explosive would be more deadly?

Maj. DEWEY. Where it is a localized shot. If you could get a hundred of those bombs at one spot, you may not want to use gas.

Mr. GREENE. So far as tactical considerations are concerned, the explosive bomb would be used largely against material rather than against personnel, and the gas bomb would be used against personnel?

Maj. DEWEY. Of course, that is true. But, of course, a modern gas bomb often has enough high explosive in it so that it is no toy.

Mr. TILSON. But they have special bombs for personnel?

Mr. GREENE. The choice of the military commander is based on how the greatest effectiveness may be secured?

Mr. SHALLENBERGER. Gen. Gorgas, you spoke a while ago about the prevalence of meningitis in the locality of the Camp Funston site. There are Nebraska troops at Camp Funston. I understood you to say to charge that that particular spot has meningitis germs, but that the whole region was more or less affected, and for that reason there is more meningitis in evidence there. In other words, that while some particular spot in Kansas or Nebraska might have had some epidemic of meningitis, there was no charge made on your part in reference to that particular spot?

Gen. GORGAS. No.

Mr. SHALLENBERGER. In regard to the death rate in the National Guard as compared with the other branches of the Army, I called your attention to the fact that your own report shows that that were two and a half times as many deaths in the National Guard as in the Regular Army, and as I understood it, your idea was that that was because of the fact that the National Guard had more contagious diseases like measles brought into it than the Regular Army, because the men of the National Guard come from sparsely settled sections of the country.

There are parts of Nebraska that are more sparsely settled than any of the sections of the country in the South, and yet in Nebraska we enlisted more than 15,000 men in the Regular Army, which is more than we sent to the National Guard.

If that condition prevailed all over the country, would that not rather upset your idea that the organization composed of men from the more thickly settled parts of the country were more nearly immune than the organizations composed of men from the sparsely settled districts? Do you not think there may be some other reason?

I want to ask you this question, because I think it is a marvelous thing if you could show the same death rate in the whole Army that you have shown in the Regular Army; it would be more wonderful than anything you have ever done. If we had lost out of 10,000 only 400 men in the National Guard, instead of two and a half times that number, it would have been a wonderful showing.

You have testified that so far as the National Guard is concerned, you consider that tents were perhaps more healthful than the inclosed cantonments.

Your reports in regard to your hospitals show that you did not have as complete hospitals for the National Guard as you did for the National Army, and yet you say you do not think that the incompleteness of your hospitals explains it.

Gen. GORGAS. That is right.

Mr. SHALLENBERGER. Is it possible that your Regular Army doctors, because of their long service in the Army and their better understanding of how to care for the men in the Army, are better than the new doctors?

Gen. GORGAS. I think so.

Mr. SHALLENBERGER. And the Regular Army officers are men who have had a good deal of experience in regard to the conduct of men.

Gen. GORGAS. Yes.

Mr. SHALLENBERGER. Is it not true that the officers who have charge of the men have as much to do with the health of the men as the doctors?

Gen. GORGAS. It has a great effect upon the general health of the men.

Mr. SHALLENBERGER. Do you not think a part of this trouble is because of the fact that your doctors in the Regular Army are more experienced in that particular line of work, and your officers are more experienced, and that that has more to do with it than anything else?

Gen. GORGAS. I do not think the Regular Army troops have more regular doctors with them, because we have had so few Regular Army doctors.

Mr. SHALLENBERGER. The reason I asked you that is because an officer who had been in the Spanish-American War told me that there is a certain psychology of experience with men, that when you take doctors suddenly from civil life, who have not had the care of men there, and put them in charge of large hospitals full of soldiers, that a great many of those men under those circumstances become sort of indifferent to the men whom they did not know, and that that did not apply to the doctor in civil life, where he was dealing with people he was paid to take care of; for that reason, when you consider the doctors in the Regular Army, who had had long experience in handling men, that type of men is weeded out.

Therefore, his argument was that we needed more experienced, trained doctors in the Regular Army. What would you say about that? Have you more experienced Army doctors, men who have been in the Army and are used to handling men, and know what conducts to health, than you have in the National Guard? Are the National Guard doctors inexperienced men?

Gen. GORGAS. You mean serving with the regular regiments?

Mr. SHALLENBERGER. Yes.

Gen. GORGAS. Col. Glennan tells me that we have more Regulars with the regular troops than we have with the National Army; but that does not apply to the hospitals.

Mr. SHALLENBERGER. You did not take the doctors who came with the National Guard——

Gen. GORGAS (interposing). We have had to use them, but they are all much the same.

Mr. SHALLENBERGER. I was not referring particularly to the doctors in the hospitals. Take the troops in the field. You have a certain number of medical men with the regiments. Are there not in the National Guard medical officers who are not experienced in handling men in the field, compared to the medical officers in the Regular Army?

Gen. GORGAS. I would have to look that up and see. My impression would be that we would have more of those men in a division like that at Charlotte, N. C., and my general impression is that there would not be a great difference. We only had 550 men to start with.

Mr. SHALLENBERGER. They were nearly all in the Regular Army?

Gen. GORGAS. Yes.

Mr. HARRISON. The men themselves in the Regular Army would know better how to take care of themselves than the new men in the National Army or the National Guard?

Gen. GORGAS. It is like saying that a veteran knows better how to take care of himself than a man who has just been recruited.

Mr. HARRISON. That might explain the difference in the sick rate.

Gen. GORGAS. There is an element in that. A man who has been in the Army a long time has probably had measles. Of course, he gets better food and better blankets, and everything of that kind, if he knows how to take care of himself.

Mr. SHALLENBERGER. I understood you to say that pneumonia comes largely from preexisting cases. Why is it that a man who has had measles, which has no germ, as I understand it, contracts pneumonia easier than anybody else?

Gen. GORGAS. He is more prepared to receive the pneumonia germs. He has had bronchitis.

Mr. SHALLENBERGER. Does it apply more to that particular disease than to any other disease?

Gen. GORGAS. You mean why is pneumonia a complication of measles? It is probably because measles is a respiratory disease. One of the common complications is mastoiditis. The man probably gets mastoiditis very easily from measles, because he is run down, and pneumonia is preeminently so.

Mr. SHALLENBERGER. Did you find that pneumonia is more prevalent in the southern camps than in the northern camps?

Gen. GORGAS. As a matter of fact, it is.

Mr. SHALLENBERGER. Were not the Army camps put in the South because it was supposed that the climate would be better for the men when they had to be in the tents?

Gen. GORGAS. I thought it would be.

Mr. SHALLENBERGER. But it did not turn out to be so?

Gen. GORGAS. I think it has.

Mr. SHALLENBERGER. You think you would have had more pneumonia——

Gen. GORGAS (interposing). No.

Mr. SHALLENBERGER. Did you reduce the death rate by sending the men South? You sent them South, and did not prepare to take care of them as well, although you give them as warm quarters. Did that have something to do with the high death rate in the National Guard?

Gen. GORGAS. I do not think it had.

The CHAIRMAN. You did not anticipate that we would have any such winter as we are having?

Gen. GORGAS. No.

Mr. HARRISON. When a soldier becomes very ill, is his family notified?

Gen. GORGAS. Those are the general directions. In some cases it has been neglected. We are taking the matter up to arrange it so that that will be done promptly. We are arranging to take a Red Cross man in every hospital, and it will be his business to notify the family of every man who goes into the hospital.

Mr. HARRISON. As soon as a man comes into a hospital the family will be notified?

Gen. GORGAS. Yes.

Mr. GREENE. Gov. Shallenberger suggested the possibility that the less experienced officer who comes from civil life to become an officer in the National Guard or the National Army would not be likely to have the same disciplinary control and efficiency of administration as the Regular Army officer, so that he might safeguard the health of his command. Do you not find that that probably does enter into the situation as one of the probable causes of the health conditions?

Gen. GORGAS. It is hard to answer a question like that. It is a fact that the Regular Army officer would know how to do it.

Mr. GREENE. It can not be reduced to statistics, I know, but I simply wanted to get your impression about it.

Gen. GORGAS. My impression is that when it comes to health that it does not play a very great part. If we were going to put quarantine regulations into effect, I would feel much more confident that those regulations would be carried out by a regiment of regular troops, whether I gave orders for that or not. If I gave orders establishing a quarantine in the case of one of our present National Army regiments, I would be pretty certain that they would not be carried out. Whether a man is very well fed and well clothed, and whether you could tell from your figures that he is going to have more pneumonia or less pneumonia might be questioned. If I were going to have pneumonia I would want to be well fed and well clothed. If I had before me a definite scientific proposition as to whether a well-clothed man was more likely to get pneumonia, and whether I could prove it, I would be very shaky on my experience. I have seen the worst epidemics of pneumonia in the Tropics that I have ever seen.

Mr. GREENE. I had more particular reference to the matter of discipline.

In 1898 I was an officer in a volunteer regiment. Fortunately, an officer of the medical staff, who was a very intimate friend of mine, used to drop around and talk with me. He put into my mind some ideas about company discipline, with an idea of their being effective as preventive measures in regard to epidemics starting in the camp. He casually let me know some things which it might be a good thing for me, on my own responsibility, to insist upon with my own men, to demand obedience, and so I had a little coaching, in regard to such things as forbidding the men drinking water except at certain places or points, and various other things of that kind. I found that while at first it seemed to be a little bit of petty despotism, the men soon came to understand it was in their own interest, and that command had less troubles of certain kinds than others, where there was no particular concern shown, and in which they had those troubles simply through ignorance. As we were all volunteer officers, the thought comes directly to my mind that the firmer grasp of administrative details which a regular soldier has must have a marked tendency toward creating a better health standard in the command.

Gen. GORGAS. I think that goes without saying.

Mr. ANTHONY. General, I wanted to ask if you have done anything to improve the hospitals at Camp Doniphan recently?

Gen. GORGAS. Yes.

Mr. ANTHONY. The case that was brought out in the Senate the other day was at Camp Doniphan?

Gen. GORGAS. I think it was.

Mr. ANTHONY. A Member of Congress from Kansas, Mr. Campbell, called to my attention the conditions that prevailed there before this latest development, and he gave me a letter from a banker in his district bearing on conditions in that hospital, which I think ought to be brought to the attention of the committee, and I will read it.

Gen. GORGAS. What is the date of it?

Mr. ANTHONY. It is dated December 4, 1917. He says:

COFFEYVILLE, KANS., *December 4, 1917.*

HON. PHIL P. CAMPBELL,
Washington.

DEAR SIR: I wish to get your help to improving hospital conditions at Camp Doniphan. Champ Clark saw a little of the wretched management and registered a big kick but it has not improved. Smith, a Salina boy in Company M, One Hundred and Thirty-seventh Infantry took spinal meningitis; the ward maters said that if he lasted more than two days it would be a miracle, but the authorities did not wish his parents to know. He died Sunday; he was in the hospital three weeks and never had even a sponge bath. Ted Richter, also of Company M, was in the hospital for rheumatism; he told one of the boys who went to see him that he had had no water to wash his face for two days. In one of the drills my son Robert Hugh had two bones in his hand broken. He went to the hospital and they told him that they were too busy—did not even bandage his hand; he walked 2 miles to his own tent, where a sergeant bound his hand, but so inefficiently that it had to be released. After waiting three days without treatment, he went to Oklahoma City, where a doctor gave him the much needed attention. Mr. Ball's (president of this bank) son Charles was told that he had diphtheria, and was ordered to the hospital—not in an ambulance, but he walked 2 miles through the camp, although supposed to be suffering with a contagious disease; he was put into the diphtheria ward, given 10,000 units of anti-toxin, kept with true diphtheretic patients for a week and dismissed. The boy said that it was hell and that he would rather die in his tent than to go to the base hospital.

The reports of the wretched mismanagement are almost incredible, but I have given you instances which come direct from Company M. Surely our sick soldiers deserve humane treatment, but they certainly are not getting it at Fort Sill.

If you can start something to improve conditions, I implore you to begin and earn the gratitude of thousands of parents whose sons are in that camp.

Respectfully,

CHAS. T. CARPENTER.

You think those conditions have been remedied at this time?

Gen. GORGAS. I am not prepared to assent to that statement of those conditions. I would like to have the facts in that case. I can look them up. I would like to have everything of that kind, so that if there is any defect we can correct it.

Mr. McKENZIE. I will say for Mr. Anthony's information that while I was at home during the holiday season, one of the boys from my home town had an attack of measles, and afterwards had pneumonia, at this same camp, and while I was there the father of the boy got a telegram from the hospital informing him that his boy was dangerously ill. The boy afterwards died. I cite that to show that they informed the parents that the boy was dangerously ill.

Gen. GORGAS. I was at Camp Doniphan about the time that letter was written. From inspections that have been made since I know that the hospitals are improving, and all the men are being trained everywhere. Individual instances like that convey a wrong picture. I would like to have the facts in instances of that kind in order that I may look into them and see what has occurred, and see what corrections could be made. Things of that kind would be most likely due to lack of discipline.

The CHAIRMAN. Do you not think it is remarkable that they have found so few instances of this kind in the camps of an army of over a million men organized in nine months?

Gen. GORGAS. I think, in general, the men are well taken care of in the hospitals. The same day that Senator Chamberlain read his letter, a Senator sent me a complaint from Camp Doniphan, a bitter complaint.

The mother and father of one of the men went to Camp Doniphan, and when they got there they wrote a letter to me saying they were entirely mistaken in what they had said before they left home, saying that everything that could be done was being done for their son.

The pictures are different. This mother had written a letter based on what her son had written her when the son had left home. I have no doubt that probably a good many of the facts were so, but the whole impression upon the mother had been to give her a different picture than that which really existed. I have no doubt the whole picture will be quite different. The picture, as a general thing, would be different from that which the facts show. I would like to have the facts in cases of that kind. I do not care who wrote the letter, just so we can identify the organization.

Mr. ANTHONY. Here is a newspaper article, taken from the San Antonio Express, which pictures the conditions at Camp Bowie. Where is that?

Gen. GORGAS. At Fort Worth.

Mr. ANTHONY. It tells of a father who buried two boys on the same day, one of them dying in South Carolina and the other at Camp Bowie. The letter says:

To the EDITOR OF THE SAN ANTONIO DAILY EXPRESS:

I am going to appeal to you to help me and mine in a humane way.

I have just returned from Camp Bowie with my dead boy. Had one to die in South Carolina Monday morning, December 3. I sent a telegram to the other one at Camp Bowie, telling him to come at once. I had a return wire that he was dying. I went at once, and found him dead. I had never been notified of his being sick. When I got there one of the lieutenants told me that he had been trying to see him for five days to write his insurance, and they would not let him in, but when he took the telegram he found him past human aid.

My boy, on Sunday, November 25, sent word to one of our neighbor boys (who is at Camp Bowie) to come and bring him some fruit, or something that he could eat. So this friend, who was on duty and could not go, bought the fruit and sent it by a schoolmate of my boy's. The hospital authorities would not let him in. He tried time and again to see my boy, but could not get in.

When I met him in camp, on December 4, at 4.30 p. m., he did not know that his friend and schoolmate was dead. They both enlisted together in the same company.

Now, the point is this: The Red Cross is taking up money for the soldiers, and are getting lots of it; they are going to knit their sweaters, but what they need most is nurses and nourishment, something they haven't at Camp Bowie. I saw two of the sick boys fed. Their supper consisted of camp bread, beans, raw tomatoes, and coffee. One of them could go it and the other one was trying to when I left.

I saw three taken to the hospital from the San Marcos company while I was there; knew one of them. He is the son of Henry Mueller, of San Marcos. He volunteered to fight for his country. They had him on a stretcher with one blanket over him, carrying him head first, with head uncovered. They had to carry him about 500 yards and he had just been taken out of bed with a bad case of pneumonia and was seriously sick. The wind was blowing a gale from the north and nearly freezing.

Now, gentlemen, as public men, can't you help those boys some way? The Red Cross knitting is not worth one penny to a sick soldier. They need nurses and nourishment. Those knitted sweaters are not worth a cent to the boys. I appeal to the Red Cross to send nurses and nourishment.

My boy died with his summer clothes on and was buried in his shirt sleeves. He had no coat nor overcoat. They need a heavy comfort on the cots and a quilt over the blanket.

Those boys must have help and at once. I know that many died. Now this appeal is to the public in general, to the Red Cross and the Y. M. C. A. in particular. The

only thing in particular that I could find that had been done was that the Y. M. C. A. had secured permission from the authorities to run the picture show on Sunday and charge double the regular price, and to send a preacher to preach to them. That is nourishment mentally, but they need bodily comfort. The knitting of clothes is wasting time, if they really want to help the boys.

I am ready to make affidavit to what is written here. I have no more boys up there, for I buried two in one grave the other day. But my neighbors have boys there, and if I can save the life of one I will be well paid. Of course it is nice to save their souls, but neither you nor I, nor the Y. M. C. A., nor the Red Cross can do that when they are actually suffering for bodily attention. It is enough to make an atheist of a preacher to go and look at those poor boys. The country is going wild over all those helps for the boys, but it don't reach the boys. They don't get what they really need.

My poor boy died, but he didn't die for his country; he died for the want of care and nourishment.

GEORGE W. SPARKS,
Blanco, Tex.

Is that rather rough fare for men in a hospital?

Gen. GORGAS: When was that letter dated?

Mr. ANTHONY. This is from the San Antonio Express. It is dated December 3, 1917.

Gen. GORGAS. I was at Camp Bowie about November 25. What was going on there with the feeding of the very sick men——

Mr. ANTHONY (interposing). This father, George W. Sparks, says that the boy was clad in his summer clothes and was buried in his shirtsleeves. That would show that he evidently was not dressed in his uniform when the body was sent from the camp.

Gen. GORGAS. I would like to have the facts in that case. It is possible that a great many of those things might occur. I will find out what the facts are. In those cases, we take it for granted that the situation is as represented. But I think that is unfair.

Mr. HARRISON. I have a son down there, and he has been there four weeks and the letters he has written to me have been very glowing.

Gen. GORGAS. Let me tell you what I know about the facts. In Camp Bowie there were 400 very sick men who were concentrated into six or eight wards. Those men were under the charge of 120 female nurses. Every man has his food cooked in the diet kitchen, and it is a light diet. No such food ever gets into those sick wards. The governor had complained about the very thing complained of there, about a pneumonia patient not having his face and hands washed.

Mr. ANTHONY. All the meningitis patients have female nurses?

Gen. GORGAS. They did at that time.

Mr. ANTHONY. At Camp Bowie?

Gen. GORGAS. Yes.

Mr. ANTHONY. A gentleman who is familiar with the Hestwood case tells me the only nurse the Hestwood boy had was a prisoner detailed from the camp guardhouse. Is it the practice to detail prisoners for that kind of work?

Gen. GORGAS. I happen to know that there were no female nurses at Camp Donipahn at that time.

Mr. ANTHONY. There are some there now?

Gen. GORGAS. There are 80 there now.

Mr. GREENE. There has been a report around town that several score nurses have been at Philadelphia and Baltimore waiting for weeks for assignment, and some of them have become dissatisfied,

and the complaint that seems to come from them is that they are getting tired of doing nothing, and it is said that they have been kept there at great expense. Is it proper to ask whether that matter has come to your notice?

Gen. GORGAS. That is a case where there are about 300 nurses waiting in New York and various places to go to France. They belong to the various base hospitals and have been ordered over there, and they are waiting for the notification of the transport officer to go aboard. Sometimes they are ordered to New York and they do not get a vessel to take them for a month. At the present time there are about 300 waiting there.

Mr. SHALLENBERGER. They are waiting for assignments in Europe?

Gen. GORGAS. They are waiting for transportation.

Mr. LUNN. General, the item of drugs must be a very large item. Are those drugs purchased from various concerns, or do you have any kind of a pharmaceutical corps to mix those drugs from the raw materials?

Gen. GORGAS. No; we purchase our drugs, to a large extent.

Mr. LUNN. Would it not be a tremendous saving of money if you mixed your own drugs?

Col. DARNELL. No it would not. In the case of our field medicines, it requires expensive machinery to make them, and they are put in cans. It would be absolutely impracticable to do that in the field.

In order to get sufficient medicines for this army we had to call all the pharmaceutical manufacturers here and organize them to see what they could do, and we are working them to the limit now.

Mr. LUNN. How about the prices; have they been fixed by you?

Col. DARNALL. No; the prices are gradually going up, as the things get scarce. I have a price list here on a number of our most important drugs which shows the prices before war was declared and after the war began. It is illustrative of the general trend.

(The price list referred to is as follows:)

	Price before the war.	Price in 1917.
Acid, boric, 5-grain tablets.....per 1,000..	\$0.24	\$0.32
Aether in $\frac{1}{4}$ -lb. tin.....per tin..	.18	.19 $\frac{1}{2}$
Alcohol.....per gallon..	.66	.90
Bismuth subnitrate, 5-grain tablets.....per 1,000..	1.26	2.60
Chloral hydrate, 5-grain tablets.....per 1,000..	.80	1.34
Chloroform, $\frac{1}{4}$ -pound tins.....per tin..	.099	.26
Cocain hydrochloride, $\frac{1}{4}$ -ounce bottles.....per bottle..	.975	1.74
Glycerine.....per gallon..	2.57	5.40
Magnesium sulphate (Epsom salts).....per pound..	.06	.09 $\frac{1}{2}$
Morphine sulphate, $\frac{1}{4}$ -ounce bottle.....per bottle..	.86	2.40
Oleum ricini (castor oil).....per gallon..	1.04	3.14
Oleum terebinthinae (oil of turpentine).....per gallon..	.85	1.68
Opium (powder) 2-ounce bottle.....per bottle..	.60 $\frac{1}{2}$	3.50
Phenol (carbolic acid) $\frac{1}{4}$ -pound bottles.....per bottle..	.09 $\frac{1}{2}$	.27
Potassium iodide, 5-grain tablets.....per 1,000..	.69	1.29
Quinine sulphate, 3-grain tablets.....per 1,000..	1.05	5.89
Sodium salicylate, 5-grain tablets.....per 1,000..	.40	1.08

Mr. LUNN. May I ask you regarding the antitoxin? What do you have to pay for that? The reason I ask that is that at one time, in the State of New York, in the city of which I was the executive, we had to pay from \$3 to \$5 for 3,000 units. We got it so that we could give it away. It only cost about 10 cents.

Col. DARNALL. We usually make special arrangements about that.

The CHAIRMAN. There is one other item in your estimate that I want to ask you about, General, and that is the pay of 124,188 enlisted men in your department. I believe Gen. Sharpe said you had in November 75,000 men.

Gen. GORGAS. That was the case.

The CHAIRMAN. How many have you now?

Gen. GORGAS. About 80,000, exclusive of Veterinary Corps, Sanitary Corps, and Ambulance Service. If we can get up to 10 per cent of the total forces, we expect to have our full allowance.

The CHAIRMAN. Do you need all of the 124,188?

Gen. GORGAS. Yes; and more than that for a million and a half men.

The CHAIRMAN. How many do you need for a million and a half men?

Gen. GORGAS. I think about 150,000, exclusive of Veterinary Corps, Sanitary Corps, and Ambulance Service.

The CHAIRMAN. Will you put in the record a statement showing just exactly how many you need for a million and a half men, and for two million men, together with the pay and allowances, and also include the same information in a detailed statement in reference to the officers in your department?

Gen. GORGAS. I will be glad to do so.

(The statements referred to are as follows:)

Commissioned and enlisted personnel of the Medical Department, with their approximate pay and allowances, required for the military establishment at the several strengths indicated.

Class of personnel.	Present active.	Strength, 1,500,000.		Strength, 2,000,000.	
		Required.	Cost.	Required.	Cost.
<i>Commissioned.</i>					
Medical, including Reserve Corps active.....	1 15,060	15,000	\$45,000,000	20,000	\$60,000,000
National Guard and National Army.....					
Dental, including Reserve Corps active and National Guard.....	2 1,763	2,000	6,000,000	2,667	8,000,000
Veterinary, including Reserve Corps active....	3 1,002	1,100	2,725,000	1,450	3,915,000
National Guard and National Army.....					
Sanitary Corps, National Army.....	4 722	1,500	4,050,000	2,000	5,400,000
Ambulance Service, National Army.....	5 135	214	515,000	214	515,000
<i>Enlisted.</i>					
Medical Department proper.....	6 78,576	150,000	65,300,000	200,000	87,070,000
Veterinary Corps.....	7 6,000	19,200	7,770,000	25,600	10,360,000
Sanitary Corps.....	8 600	3,945	1,645,000	3,945	1,645,000
Ambulance Service.....	9 6,124	7,605	3,065,000	7,605	3,065,000
Total.....	109,982	200,564	136,070,000	263,481	179,970,000

1 Number required on basis of 10 to every 1,000 of total strength; cost estimated at \$3,000 per annum each.
2 Number required on basis of 1 to every 750 of total strength; cost estimated at \$3,000 per annum each.
3 Number required on basis of section 16, National Defense Law, June 3, 1916; cost estimated at \$2,700 per annum each.
4 Number required on basis of 1 to every 1,000 of total strength; cost estimated at \$2,700 per annum each.
5 Number as prescribed by the President; cost estimated at \$2,400 per annum each.
6 Number required on basis of 10 per cent of strength of Army; cost averaged allowing four grades \$435.36 each.
7 Number required on basis of 16 men to each 400 animals, and 480,000 animals to 1,500,000 men; cost averaged \$404.70 each.
8 Number required not proportional to total strength, but changed as necessity requires; cost averaged at \$417.08 each.
9 Number required not proportional to total strength but is fixed by the President; cost averaged at \$403.31 each.

Commissioned and enlisted personnel of the Medical Department, with their approximate pay and allowances, required for the military establishment at the several strengths indicated—Continued.

Class of personnel.	Strength, 2,500,000.		Strength, 3,000,000.	
	Required.	Cost.	Required.	Cost.
<i>Commissioned.</i>				
Medical, including Reserve Corps active National Guard and National Army.....	25,000	\$75,000,000	30,000	\$90,000,000
Dental, including Reserve Corps active and National Guard.....	3,333	10,000,000	4,000	12,000,000
Veterinary, including Reserve Corps active..... National Guard and National Army.....	1,800	4,060,000	2,200	5,940,000
Sanitary Corps, National Army.....	2,500	6,750,000	3,000	8,100,000
Ambulance Service, National Army.....	214	515,000	214	515,000
<i>Enlisted.</i>				
Medical Department proper.....	250,000	108,840,000	300,000	130,610,000
Veterinary Corps.....	32,000	12,950,000	38,400	15,540,000
Sanitary Corps.....	3,945	1,645,000	3,945	1,645,000
Ambulance Service.....	7,605	3,065,000	7,605	3,065,000
Total.....	326,397	222,825,000	389,364	267,415,000

Mr. TILSON. General, have you a large number of officers who have been selected and commissioned, and who are ready for call in case we should wake up some fine morning and find a great many wounded men to be cared for; more than we had calculated on?

Gen. GORGAS. We have about 6,000, and are increasing that number all the time.

Mr. TILSON. Do you think that any practicing graduate physician should be enlisted and taken away for the draft and should not be enrolled in some sort of reserve corps, where he could be used?

Gen. GORGAS. We are getting up a volunteer corps of that kind now, to take in all physicians.

Mr. TILSON. I know of one instance of a doctor in a country community who was drafted and put in the ranks, and made a private, and the people in that community have no doctor now. There is no doctor within 15 miles, and I have reports that a number of people have died there without any opportunity of having the services of a physician, and yet that doctor was taken out of that community and sent to a National Army camp, and he is still a private.

Gen. GORGAS. We would like to get hold of that man. We will get him.

(Thereupon the committee adjourned, to meet to-morrow, Wednesday, January 30, 1918, at 10.30 o'clock a. m.)

ARMY APPROPRIATION BILL, 1919.

COMMITTEE ON MILITARY AFFAIRS,
HOUSE OF REPRESENTATIVES,
Wednesday, January 30, 1918.

The committee met at 10.30 o'clock a. m., Hon. S. Hubert Dent (chairman) presiding.

STATEMENT OF BRIG. GEN. E. EVELETH WINSLOW, CORPS OF ENGINEERS, ASSISTANT TO THE CHIEF OF ENGINEERS, ACCOMPANIED BY MAJ. EARL NORTH, MAJ. ROSCOE C. CRAWFORD, AND MAJ. RUFUS W. PUTNAM, ENGINEER CORPS.

The CHAIRMAN. General, the first item for the Engineer Corps is on page 19, for the pay of 400 officers, and the amount asked for is \$925,200. We have had some information on that item from Gen. Sharpe. How many officers are there in the Engineer Corps now?

Gen. Winslow. The authorized commissioned strength of the Corps, by law, is 505. We now have about 330 officers in the Regular Service, of whom 5 are detailed on the General Staff. However, we had an examination last week of candidates for commissions in the Engineer Corps, and we expect to have another examination about July 1, the time being chosen so that it will be convenient for next June's graduates of technical schools to take the examination. From those two examinations it is expected that the corps will be practically filled.

According to law, commissions are open to two classes of persons only—first, graduates of the Military Academy, and, second, graduates of approved technical schools—who are unmarried, and between the ages of 21 and 29 years, and who pass the examination successfully. In order to be eligible to take the examination they must hold diplomas showing graduation from engineering courses in an approved technical school. The examination held last week was for those who have already graduated from such schools.

The CHAIRMAN. Is the list of those schools published by the War Department?

Gen. WINSLOW. It is not published, but there is a list which has been prepared, with the assistance of the Bureau of Education of the Interior Department and the Carnegie Foundation for the Advancement of Teaching. By the terms of the act of June 27, 1911, commissions in the Corps of Engineers were opened to civilian candidates.

Mr. GORDON. How many of those approved technical schools are there?

Gen. WINSLOW. There are 117 on the list now.

The passage of the act I just referred to made it necessary to select the schools which were to be put on the approved list. The War Department felt that it did not have the information necessary, and it asked the assistance of the bureau of education of the Interior Department and later of the Carnegie Foundation. With the assistance of those two institutions a list was drawn up and approved by the Secretary of War. Modifications have been made in the list since that time, from time to time, but in every case those modifications were made upon the recommendations of either one or both of the institutions which assisted us in making the list. A general revision of the list is in process now, and it is expected to be completed during the month of February.

The CHAIRMAN. Who conducts the examination?

Gen. WINSLOW. The questions which are to be asked in the examinations are prepared by the engineer school and the office of the Chief of Engineers together—that is, they are prepared by the members of the faculty of the engineer school, and are then reviewed by the assistants to the Chief of Engineers. These questions are then sent out through the Adjutant General to boards which meet in various places all over the country, consisting partly of medical officers and partly of line officers who merely supervise the examinations.

Then the report of the doctor and the answers to the questions are all sealed and returned to the Chief of Engineers, and are there examined by a board appointed for this purpose. The present board consists of three regular officers and three reserve officers, who are about to mark the papers of the candidate who took the examination held last week.

The CHAIRMAN. Does the list of 505 officers include engineers who are on river and harbor work?

Gen. WINSLOW. It includes the entire corps. At the present time there are only 13 officers on what might be called construction work, and all but five of those are engaged, at least partially, on fortification or other military work. So there are only five officers at the present time who are doing civil work exclusively. Most of the officers on construction work are not physically capable of going into the field. Had they been in any other branch of the service than the Engineer Corps they would probably have been retired, but because of their engineering knowledge they have been retained to the Corps of Engineers, and they will probably be left on the active list as long as they can perform satisfactory duty as construction officers.

The CHAIRMAN. Do you not have reserve officers in the Engineer Corps on this work.

Gen. WINSLOW. These officers are in the Engineer Corps of the Regular Army; they are not reserve officers. The river and harbor work is now carried on under the supervision of division Engineers, all of whom are Regular Army officers. The district officers are nearly all assistant engineers who have been called into the active service as district officers, under the same act of February 27, 1911.

In other words, when the war broke out we had about 120 officers on construction work. We have called to active military duty, either in this country or abroad, all except about 13 of these officers and have turned their work over to those who were their civilian assistants before the war.

The CHAIRMAN. The enlisted men in this corps are paid along with the enlisted men of the line; that is, they are carried with the enlisted men of the line?

Gen. WINSLOW. Yes, sir. According to law, the enlisted men of the Corps of Engineers and the officers serving with them are a part of the line of the Army.

Mr. CRAGO. Where do these engineers come in who are in France now constructing the railroads?

Gen. WINSLOW. The railroad organizations were formed last May by order of the Secretary of War. They were organized as regiments of the legal strength of the time; that is, with 33 officers and slightly less than a thousand men. Subsequently their strength was increased to 47 officers and about 1,600 men. Each regiment was given two Regular officers, one Regular officer as a colonel to organize the regiment and command it, and another Regular officer as adjutant to attend to the paper work. All the other officers were actually railroad construction and operating men, and were selected, to a great extent, by Mr. Felton, who was given the title of Director General of Railways. The title has recently been changed to Director General of Military Railways. He was formerly president of one of the big railroads running out of Chicago and was in close touch with the various railroad presidents all over the United States, and selected nearly all of the officers for the first railroad regiments and also for several others formed since.

Mr. CRAGO. Gen. Atterbury is also in the railroad organization, is he not?

Gen. WINSLOW. He was sent abroad to do about the same thing abroad that Mr. Felton does in this country. Just as Mr. Felton is the advisor in railroad matters to the Secretary of War, Gen. Atterbury is the advisor in similar matters to Gen. Pershing, and he has been given the title of Director General of Transportation, and is in charge of all the various matters connected with transportation, such as railroads, terminals, highways, docks, etc.

Mr. CRAGO. These organizations are not a part of the Regular Army but of the Engineer Reserve Corps, and they were organized under the provision in the act of May 18 which authorized the President to organize special and technical units?

Gen. WINSLOW. That is correct; they are a part of the National Army, and were organized under the provisions of the act of May 18, 1917.

Mr. CRAGO. They were organized as special and technical units?

Gen. WINSLOW. Yes.

Mr. TILSON. How many reserve officers are there in the Engineer Corps?

Gen. WINSLOW. There are now approximately 5,700, of whom all but about a hundred are on active service.

Mr. CRAGO. Are those officers selected by a competitive examination or on the recommendation of men eminent in the engineering profession; that is, the ones who are in these particular regiments?

Gen. WINSLOW. Those regiments were formed somewhat specially, in a somewhat different manner from the way in which the remainder of the Engineer Reserve was formed.

The railroad officers were selected by Mr. Felton upon the recommendation of the officials of the various American railroads. For

instance, one regiment of railroad men was formed in Boston. A certain proportion of the officers and enlisted men of that regiment came from the Boston & Albany Railroad, a certain other proportion came from the Boston & Maine Railroad, and a certain other proportion was selected from the men on the New York, New Haven & Hartford Railroad.

Another of the railroad regiments was formed in Pittsburgh, most of the men in that regiment coming from the Pennsylvania Railroad and a few of them from the Baltimore & Ohio Railroad.

Ordinarily the reserve officers are selected in a different way. The national defense act provided for the organization of Officers' Reserve Corps in the different branches of the service, and a few months after that act was passed regulations were published by the War Department as to the method of organizing the Officers' Reserve Corps.

The Engineer branch of the Officers' Reserve Corps was formed in pretty much the same way as the others. We have organized in different parts of the country something like 60 local boards. Each board is composed of an Engineer officer of the regular service, sometimes with an assistant already commissioned in the reserve corps, and with at least one doctor. Sometimes the doctor is a regular officer, but more often he is an officer of the reserve corps.

Any engineer in civil life who offers his services or applies for a commission in the reserve corps is sent before one of these local boards. He is examined physically by the doctor and professionally by the other members of the board. He has to state his engineering education and his technical experience since his graduation from an engineering school. According to the table, if he is a graduate of a recognized technical school or has had a certain number of years' experience, he is eligible for a commission as second lieutenant. If he has had more engineering experience, he is eligible for a commission as first lieutenant, and so on up, the more experience he has had the higher the rank for which he is eligible. For a commission in any grade he is required to have had a certain amount of actual experience or to have graduated from a recognized technical school and to have been a certain number of years in engineering work.

Those records of the local boards are sent to Washington, and in the office of the Chief of Engineers they are laid before a central board for examination and review. The larger proportion of those papers are sent through rapidly and passed with the recommendation that the man be given a commission. There are, however, of course, a number of cases where there is something doubtful, and then the case has to be considered carefully by the central board.

Prior to the 4th of March last year most of the applications we had received for commissions in the reserve corps came from men well along in life, with considerable experience in the engineering profession, and we had great difficulty in commissioning them, because the law says that the proportion of majors in the reserve corps shall not bear a greater proportion to the number of second lieutenants than the proportion of majors in the regular service bears to the number of second lieutenants in the regular service. We had so few men suitable for second lieutenants, taking their age into consideration, that the central board had to postpone the commissioning

of some of the older men because there were not enough younger men to allow the proper proportion of majors to second lieutenants. We were compelled, therefore, to make a rule that we would not commission any man as major unless he was 45 years of age. The rule had to be as fair as possible to all people concerned, so we adopted the rule of age, which is fair to all.

Mr. CRAGO. Would it have been good policy to have repealed the provision in the law in regard to that proposition?

Gen. WINSLOW. I think not. At that time the President came out very strongly for universal military service in his inaugural address, and as it was evident that we were going to enter the war there were a great many applications——

Mr. SHALLENBERGER (interposing). Do you mean to say the President came out in favor of universal military service?

Gen. WINSLOW. I may have used the wrong term. I was only trying to distinguish as to dates. I should have said universal liability rather than universal service.

The younger men who were eligible began to submit their requests in large numbers. We sent to camp most of those who applied for the first training camp, and after we had passed on their papers we took a census. We found by the middle of June that we had received something like 15,000 applications, whereas we expected we would need only about 5,000 officers.

It became necessary, therefore, to select with great care from the 15,000 applications the 5,000 men we would commission.

The first rule we adopted was that we would waive no physical defects. In the second place, we found we could get all the officers needed by taking only men over 30 years of age. Consequently, except for the men who applied prior to the opening of the first series of training camps, we commissioned no men that were not over 30 years of age, and in that way restricted the number of men commissioned to about 5,000.

About the middle of July the Secretary of War issued instructions that no applicants within the draft age who applied thereafter should be commissioned in any of the noncombatant branches of the service, unless the head of the corps could certify that there was no man outside of the draft age who was available for that particular position. That was simply confirming the authority he had given to the Chief of Engineers to commission only men over the draft age.

Mr. ANTHONY. You do not consider the Corps of Engineers a non-combatant corps, do you?

Gen. WINSLOW. When the officers are commissioned, we do, because all officers of the Corps of Engineers are commissioned as staff officers, and they only become line officers when assigned to duty with troops.

Mr. ANTHONY. The Engineer organizations are combatant troops, are they not?

Gen. WINSLOW. Yes, sir; the larger portion of them are.

Since June 20 we have adhered strictly to the rule I just mentioned, except in some cases where we needed men for some special service, as when we have to get a few camouflage men. In another case we needed to develop certain physical appliances, which required the services of mechanically skilled men who had been employed in

mechanical laboratories. We had to get a few of these men inside the draft age.

Then when the railroad organizations were increased, we had to get a few railroad men inside the draft age.

Mr. TILSON. Were those men selected by railroad officials?

Gen. WINSLOW. Yes.

Mr. TILSON. So far as the railroad engineers were concerned, they were really selected by the railroad officials, and not by you?

Gen. WINSLOW. That is correct, with the exception of two officers for each regiment, one who was selected as the commanding officer, and another who was selected as the adjutant. All the other officers of those railroad regiments have been selected by Mr. Felton upon the recommendation of the officials of the railroad companies.

Mr. McKENZIE. All of those railroad officers had to pass the same physical test as other men who were commissioned, notwithstanding the fact that they were selected by the railroad officials for this special work?

Gen. WINSLOW. Yes; they went through the same form of examination, except that the certificate from Mr. Felton that they were good railroad men was considered to take the place of the usual professional examination.

Mr. SHALLENBERGER. There was really no mental examination of these men who were picked for these railroad regiments?

Gen. WINSLOW. No.

Mr. ANTHONY. You say the men in the railroad regiments were appointed by the railroad authorities. What railroad authorities?

Gen. WINSLOW. One regiment was formed in New England. About one-third of the men in that regiment were selected by the officials of the Boston & Albany Railroad, another third came from the New York, New Haven & Hartford Railroad, and the rest of the men in the regiment were from the Boston & Maine Railroad. I understand they were recommended by one of the vice presidents of those roads.

Mr. ANTHONY. You took the recommendations of the vice presidents of each of these roads as to the appointment of officers for the regiment of railroad men?

Gen. WINSLOW. As to the qualifications of the men for railroad duty. It was the same with other regiments. There was one regiment, the Nineteenth, which was formed for shop work, especially for the repair and erection of freight cars. They were selected generally from all over the country and organized at Philadelphia. There was one operating railroad regiment formed in Boston, one in Chicago, one in St. Louis. The shop regiment was formed in Philadelphia and the construction regiments one on the Pacific coast and another in the South, at Atlanta, Ga., and another at Pittsburgh, and another at New York, and another at Detroit.

Mr. McKENZIE. What was the Thirteenth Regiment, organized at Chicago?

Gen. WINSLOW. That is an operating regiment.

Mr. ANTHONY. I read something in the papers about the colonel of one of the Engineer regiments cutting a lot of red tape and getting to France outside of the regular orders of the department. What do you know about that?

Gen. WINSLOW. That incident was somewhat exaggerated in the newspapers. When the regiments were ordered organized early in

May of last year the first question which came up was where we would be able to quarter the men. We wanted to organize the regiments near the railroad centers, and in most places we managed to get the use of buildings in the immediate neighborhood.

In Chicago we got the use of a municipal pier, with a house on it. In St. Louis they made use of some quarter boats not then at work.

The Boston regiment got hold of a fair-ground building, and so did the Philadelphia regiment. There were no buildings in Pittsburgh, and so the colonel of that regiment applied for tentage. He was told there was no tentage available at that time and that the Quartermaster Department could not purchase any standard tentage, so he went out and in the vicinity of Pittsburgh found a tent manufacturer who had some tents which were not of the standard color and size, but he said they would do, and he just ordered the tents, and they were sent to him, and the bill was paid by the Quartermaster Department.

Mr. ANTHONY. How did he happen to get his regiment to France quicker than the other Engineer regiments?

Gen. WINSLOW. That regiment was organized at the railroad center of Pittsburgh, where there were many railroad men, and they recruited more than a hundred men a day. The colonel recruited the men for that regiment so rapidly that the thousand men were gathered together in about a week and a half from the time he got the authority to go ahead. Later he was able to send men to the Detroit regiment and some to other places. Another reason why he got that regiment equipped so soon was because he was nearer the points of supply.

Mr. ANTHONY. There was no such thing occurred as taking that regiment to France without orders?

Gen. WINSLOW. Absolutely not.

Mr. ANTHONY. The only red tape that was cut was in the purchase of tents?

Gen. WINSLOW. Yes. The regiment in New York had had something of a head start. It was organized with the assistance of the New York office of the American Society of Civil Engineers. But they were not able to get the men as quickly as at Pittsburgh. On about the 6th or 8th of June we sent out questions to all of the regimental commanders asking as to the status of their regiment, and Col. Jadwin, who had command of the Pittsburgh regiment, replied that he would be ready by the 13th. He was ready by the 13th.

The New York regiment was not ready for a few days after that. Since Col. Jadwin had his regiment ready first, we considered that it was the proper thing that he should go first, and, as far as we know, his was the first American regiment that ever passed under arms through England. I believe it was not reviewed by the King, but was taken straight through England and did not stop long enough to be reviewed by the King.

Mr. ANTHONY. How many days elapsed after the order for the organization of this regiment was given until it left New York?

Gen. WINSLOW. It was reported ready within four weeks from the time Col. Jadwin was directed to organize it, but it did not leave New York until the 9th of July.

Mr. ANTHONY. Were the men uniformed and armed?

Gen. WINSLOW. They were uniformed, armed, and equipped by the 13th day of June.

Mr. ANTHONY. Did you see the men?

Gen. WINSLOW. I did not.

Mr. ANTHONY. They were a pretty good looking body of men?

Gen. WINSLOW. I did not see them, but from the photographs they were a very good looking lot of men. Mr. Felton went out to see them, and they gave him the honor of a review.

Mr. TILSON. How were they armed?

Gen. WINSLOW. They were armed with the older Springfield rifles.

When the question of the organization of the railroad regiments came up there was a discussion in the War Department as to whether they should be given rifles or not. The idea was that they would work principally on the railroads, and that therefore only a small proportion of the men need be armed with rifles. The Chief of Engineers went to the Chief of Ordnance and to the Chief of Staff and said he wanted to bring these men as quickly as possible under military discipline, and that having rifles to drill with would be a great advantage, and so the rifles were given to them, with the understanding at first that they would only be used for drill purposes in this country, and that they would be left behind when the regiment started, it being thought then that the men would be sent direct to France.

When it came time to send the railroad regiments to Europe the available transportation which had been expected, and which had been originally assigned to those men, had been turned over to Gen. Pershing, to take over the first contingent of his expedition, and it was then evident that the railroad regiments would have to land in England. It was then thought that it would be a rather peculiar thing to have these so-called American troops land in England without arms, and so they took the arms over with them.

Mr. ANTHONY. I was wondering what sort of an appearance they made in England after having been only a few weeks in training.

Gen. WINSLOW. They looked very well. Col. Jadwin, who was the commanding officer who took the first railroad regiment over there, has an excellent record in that direction. He was one of the officers picked out as major in one of the special engineer regiments formed during the Spanish-American War, and he brought his battalion into shape in very quick time.

In organizing this railroad regiment he had the assistance of a great many men around Pittsburgh. The National Guard men in that section of Pennsylvania took a great interest in the regiment and offered their services as drillmasters, and the regiment was put into shape very quickly.

Mr. FIELDS. It was understood in England that that was an engineer regiment?

Gen. WINSLOW. It was understood in England that that was an engineer regiment. Col. Jadwin's regiment was railroaded through England. It went through very rapidly and was not reviewed by the King, but the other regiments which went a little later were kept in England for a few days, and they were reviewed by the King. The second regiment to go was the New York regiment, and that was reviewed by the King, and that was under command of Col. McKinstry.

Mr. SHALLENBERGER. In regard to these men who were taken in among the 5,000 Reserve officers, who were mostly railroad men, were they given the same rank, pay, and allowances that the Regular Army officers get while in the service?

Gen. WINSLOW. They have the same pay and allowances as the Regular Army officers. They take rank according to their commissions. A good many of them are in command of Regular officers of lower grade.

You have made a mistake in saying there were 5,000 railroad men. There was a total of about 5,000 officers all told, railroad and others.

Mr. SHALLENBERGER. I will say, then, those particular men you referred to who came in on certificates. Would any one of those officers, with the rank, or major or colonel, have authority over and take precedence over a Regular Army Infantry captain?

Gen. WINSLOW. He would outrank the captains; and if he were a major and were in command of a battalion and was working with a party of Infantry, he might be in command of a number of Infantry officers.

Mr. SHALLENBERGER. What do you think about that as a military proposition? Is not that question going to come up in this war where we have so many men of limited military experience outranking men with military experience?

Gen. WINSLOW. If the Infantry officers were men who had served for a considerable length of time in that arm of the service, it might come about that you would have a major without any military experience commanding men who had had military experience. This same thing might occur in the Infantry regiments of the National Army. They are officered in the same way—by reserve officers picked from among the graduates of the officers' training camps.

Mr. SHALLENBERGER. I have in mind the case of an officer who was for 19 years in the Regular Army, and who was a senior captain a short time ago. I think he has had some promotion since, and I consider him one of the finest officers I know in the Regular Army. He told me he was running up against majors and colonels and other officers who have just come into the service, and who would outrank him in any military operations, and it occurred to me that in the case of these reserve officers that is a proposition that ought to be taken into consideration.

We have not ever passed any legislation in regard to it, and there is a provision in the law that provides that where a reserve officer has the same rank as the Regular Army officer the Regular officer will outrank him. But the Regular officer does not outrank the reserve officers of a higher grade.

Gen. WINSLOW. That is true.

Mr. SHALLENBERGER. I was wondering if that is not a proposition that might require legislation, as it might affect men in the field.

Gen. WINSLOW. That is a question which really affects rather the Infantry and the Cavalry.

Mr. SHALLENBERGER. I can see how it would not affect the men in the Staff Corps so much. But your particular corps has a tremendous number of men already in France, and you are going to have a great many more along the lines of communication, and so it occurred to me that the possibility of a conflict between reserve Engineer officers

who are simply railroad men and men of the line, who are supposed to be trained military men, might become quite a problem.

Gen. WINSLOW. In the Corps of Engineers we have detailed so many of the senior officers of the corps to these various special Engineer organizations that promotion has been quite rapid, and the men who are captains in the regular service and who have not been given temporarily higher rank are men who have been out of West Point for less than three years. In so far as their military education is concerned, these men may be considered as possibly the superior of the reserve officers of higher rank, but when it comes to handling men and actually getting work done an Engineer who has been in the practice of his profession for some years and has been handling men is probably better qualified to handle men than a man who has been in the service only two or three years, even if a West Pointer.

A similar question came up some time ago. We are organizing now, among the engineer units, one that is known as the Twenty-third Engineers, a highway unit. When this unit was first formed the colonel commanding wanted a lieutenant colonel detailed from the Regular Service—one of the younger men in the service. We asked him to hold on, and he finally came to the conclusion that it was better to get a lieutenant colonel for a regiment like that, where the captains and lieutenants are taken from engineers in civil life, who was from civil life himself and who had had long experience in handling large bodies of men in actual construction work, and not take a younger man from the military service, but who had probably not done as much construction work and handled as many men.

Mr. SHALLENBERGER. I can see how that would work out in the case of a young lieutenant who has only been out of West Point three years and has been made a captain. I know a number of captains in the Infantry who have been in the service 10 years, and yet a man who was a major with only a very limited service would outrank the other man. That is not serious, because each of those men have had military experience.

But consider the case of the men who have come in with no military experience. Would it not have been better if those reserve officers had not been given rank at all as line officers, but had been given some other rank, which would indicate the character of their service, so that they would not have any authority over troops in the field, as compared to the real military men in the Army?

Mr. CRAGO. A distinction ought to be made between the right to command and the rank of these men who do not command troops. But that would not come up once in a thousand times.

Mr. SHALLENBERGER. I have had the question put up to me, and it might come up.

Gen. WINSLOW. When last April, the idea was first considered of assisting the French in their railroad work abroad, the first idea was that we would pick up railroad men and send them over as civilians. But the French Government objected. The French Government said they wanted no persons sent over who were not in the military service, under military discipline, and with military rank, and wearing uniforms.

Mr. SHALLENBERGER. Does the French Army give these men the same rank as the line officers in their army?

Gen. WINSLOW. I understand the French railroads are run by railroad engineers, who are military engineers.

Mr. SHALLENBERGER. Do they have the same rank?

Gen. WINSLOW. They have the rank, and they exercise authority in their respective places. A major in one of the railroad regiments would not have the authority to go outside and take command of Infantry which happened to be going along there, unless there was some special reason for that.

The CHAIRMAN. What do you mean by that?

Gen. WINSLOW. I mean Infantry troops coming along. He has nothing to do with them. He is not in command of them. It would only be in a case where he and his battalion happened to be left with a small Infantry force, in which the senior officer was a captain, left by themselves, away from any other commander. Then, being the senior officer present, he would be in command.

Mr. SHALLENBERGER. How would it be in the case of the moving of troops and the conduct of trains? Who would be in command, the railroad man or the line officer?

Gen. WINSLOW. The handling of railroad trains is done by special orders, and the commander of the troops has nothing to do with the movement of the train, even in this country. When a regiment is put on the train they have an officer along, a quartermaster, who is handling the train. Those orders have been repeated in print recently, that the commanding officer of troops must not interfere with the running of the train.

Mr. SHALLENBERGER. It has been testified before this committee that the quartermaster corps of the French Army do not have the same rank and authority, nor wear the same uniform as the man of the line, and that they are saluted differently from the men of the line.

Gen. WINSLOW. That is in the French Army?

Mr. SHALLENBERGER. That is what we have been told. I wanted to find out if the same thing did not apply to the Engineer Corps and to the handling of the railroads, whether it would not have been wiser for us to have adopted some such policy, rather than commission those men as officers in the Army.

Gen. WINSLOW. I think not. I do not think there is going to be any conflict in regard to that matter.

You brought out the point in regard to there being captains of Infantry who have been in the service for quite a number of years. That is a matter which relates solely to the Infantry and Cavalry, and not to the Engineer Corps.

Mr. SHALLENBERGER. I was just stating a fact, and stating my opinion that that conflict might occur.

The CHAIRMAN. I notice that last year we gave you for this item for pay of officers in the Engineer Corps \$482,400. That was the amount of the appropriation in the appropriation bill of May 12, 1917, which was the Regular Army appropriation bill, and that indicates that for this purpose the War Department did not go before the Committee on Appropriations and ask for a deficiency appropriation under this item. Will you explain that? That is the only place I have discovered that.

Gen. WINSLOW. Mr. Chairman, all of this matter in regard to the pay of officers is handled entirely by the Quartermaster Department, and it is all handled as one fund, and we know nothing about it, except that we give the Quartermaster General an estimate as to the average number we expect to have in the Corps of Engineers during the succeeding fiscal year. We know nothing about the details, and keep no tables.

The CHAIRMAN. Then it is purely a matter of calculation, as to how much the appropriation is to be?

Gen. WINSLOW. At the present time we have about 330 officers, and we expect to get close to 505 some time during the early part of the next fiscal year.

Mr. LUNN. What arrangements have been made, in case you get in the draft young engineers, to transfer them and get them into the Engineer Corps, rather than have them put in the Infantry?

Gen. WINSLOW. You mean as enlisted men?

Mr. LUNN. Yes.

Gen. WINSLOW. Just before the men were to report under the draft, instructions were given by The Adjutant General that an investigation should be made of the men as they reported, and they should be assigned where they would apparently fit in best. In each division of the National Army there were a few officers who were assigned to duty to receive the men when they came in and assign them to the different organizations. In the majority of the divisions they seem to have taken care to pick out the men who were mechanics, or the men who had an engineering education, and to assign those men to the Engineer Corps, as far as they would go.

As soon as the regiments were formed, the regimental commanders would go through their regiments, and where they found men who seemed to be unfitted they would report it to the division commander. These men would go out, and other men would take their places. The reports that come now are that in general the class of men received in the Engineer Corps are very good.

Mr. LUNN. I was thinking about the misplaced men. I have in mind the case of a young fellow who was working for the General Electric Co. He said he wanted to go into the Engineer Corps. I said, "You ought to stay on your job; you will be exempted on the industrial side, because they can not afford to take you away from your job with the General Electric." He took my advice, but the draft officers did not see it that way. They thought somebody else could be secured for his job with the General Electric, and so they took him in the draft. That was all right.

I took up the case to see if he could not be transferred to a place where his special talent could be used, but with utter failure. I am one of those who was very enthusiastic for the selective draft, and there are a good many who were not so enthusiastic and they have the laugh on us, in regard to the selective end of it.

Here, for instance, is a young engineer, or there is a young fellow skilled in some other technical line, do you happen to know whether there is any method by which the selective end of it could be made operative?

Gen. WINSLOW. Each division has an engineer regiment in it, and that regiment is supposed to be composed of so many men of each

trade—mechanics, blacksmiths, and men of various trades and professions, and some men who are professional engineers. The organization of that regiment from among the men who have been drafted into a particular division is left to the division commander. He is responsible for his division, and presumably he will try to get the men who will give the best service in the places where they are put. In some of the divisions the division commanders have directed that that particular class of men be put in the Engineer regiment. Unfortunately, some of the accounts we have received are that this has not been done in all divisions.

Then, the question came up as to recruiting the special Engineer organizations, such as the forestry organization and the highway organization. The law provides that those organizations may be organized by voluntary enlistment or by draft, and to a certain extent they are all organized by voluntary enlistment. Sometimes where we wanted additional men we had to take the men from among those who had been drafted. There is one railroad regiment which was being organized as a regiment of car erectors. We are purchasing thousands of freight cars and sending them to France knocked down, and they have to be put together, so we wanted an organization for that purpose on the other side.

Mr. SHALLENBERGER. Are they all commissioned?

Gen. WINSLOW. Some of them are, but the larger proportion of them are enlisted men. Mr. Felton, through the assistance of railroad officials, got the names of the drafted men who had been working in the car shops of the different railroads and in the different car-building companies' plants, and also found out to what divisions they had been sent. We asked that these particular men be sent to that car-erecting unit. Orders were issued to that effect, and a number of them were sent.

In a few cases the division commanders objected to having the men taken by name from their divisions, and after consideration the War Department finally decided that it was unfair to do it. So the division commanders were directed, instead of taking the men out by name, to select them. If we asked for 30 men from a particular division, the division commander would be asked to pick out 30 men who were competent to do the work, with the idea that he would pick out the men who were the most competent. In most cases they did what we asked them to do, and sent good men, but in one or two cases the division officers took the opportunity of unloading on us.

Mr. QUINN. What do you mean by "unloading"?

Gen. WINSLOW. By that I mean taking people that the division commander did not want to keep and sending them somewhere else.

Mr. CRAGO. It worked both ways. In some cases men would be asked for by the division commander and you would take away from the captain of a company one or two of the most valuable men in his organization.

Gen. WINSLOW. Of course.

The CHAIRMAN. I wish you would put in the record the total number of special and technical units that have been organized in your branch of the service, together with the size of the same and the rank and pay of the officers.

I just want the number of technical and special units, with the number of men in them and the rank of the officers. I do not care for a statement as to how many of them are in this country and how many in France.

MEMORANDUM.

The number and technical designation of the various engineer units now authorized and being raised under the direction of the Chief of Engineers, with the strength of each unit in officers and enlisted, are as follows:

Forty-three divisional engineer regiments, each consisting of 1 colonel, 1 lieutenant colonel, 2 majors, 11 captains, 16 first lieutenants, 12 second lieutenants, 1,589 enlisted men.

Two mounted engineer battalions, each consisting of 1 major, 5 captains, 7 first lieutenants, 3 second lieutenants, 358 enlisted men.

Forty-five divisional engineer trains, each consisting of 1 first lieutenant, 1 second lieutenant, 82 enlisted men.

Two forestry regiments, (a) consisting of 1 colonel, 1 lieutenant colonel, 2 majors, 13 captains, 20 first lieutenants, 12 second lieutenants, 1,587 enlisted men; (b) consisting of 1 colonel, 1 lieutenant colonel, 10 majors, 53 captains, 100 first lieutenants, 60 second lieutenants, 7,779 enlisted men.

Seven standard-gauge railway construction regiments, each consisting of 1 colonel, 1 lieutenant colonel, 2 majors, 13 captains, 20 first lieutenants, 12 second lieutenants, 1,587 enlisted men.

Five standard-gauge railway operating regiments, each consisting of 1 colonel, 1 lieutenant colonel, 2 majors, 13 captains, 20 first lieutenants, 12 second lieutenants, 1,587 enlisted men.

Four standard-gauge railway operating battalions, each consisting of 1 major, 5 captains, 10 first lieutenants, 6 second lieutenants, 774 enlisted men.

Two standard-gauge railway shop regiments (1) consisting of 1 colonel, 1 lieutenant colonel, 2 majors, 13 captains, 20 first lieutenants, 12 second lieutenants, 1,587 enlisted men; (2) consisting of 1 colonel, 1 lieutenant colonel, 3 majors, 18 captains, 30 first lieutenants, 18 second lieutenants, 2,000 enlisted men.

Five standard-gauge railway maintenance of way battalions, each consisting of 1 major, 5 captains, 10 first lieutenants, 6 second lieutenants, 774 enlisted men.

Two standard-gauge railway maintenance of equipment battalions, each consisting of 1 major, 5 captains, 10 first lieutenants, 6 second lieutenants, 774 enlisted men.

One standard-gauge railway transportation battalion, consisting of 5 captains, 10 first lieutenants, 6 second lieutenants, 774 enlisted men.

One standard-gauge railway trades and storekeepers' battalion, consisting of 1 major, 5 captains, 10 first lieutenants, 6 second lieutenants, 774 enlisted men.

One light railway construction regiment, consisting of 1 colonel, 1 lieutenant colonel, 5 majors, 28 captains, 50 first lieutenants, 30 second lieutenants, 3,909 enlisted men.

One light railway operating and shop regiment, consisting of 1 colonel, 1 lieutenant colonel, 4 majors, 23 captains, 40 first lieutenants, 24 second lieutenants, 3,135 enlisted men.

One road regiment, consisting of 1 colonel, 1 lieutenant colonel, 4 majors, 23 captains, 55 first lieutenants, 29 second lieutenants, 4,655 enlisted men.

Two supply and shop regiments (1) consisting of 1 colonel, 1 lieutenant colonel, 2 majors, 13 captains, 20 first lieutenants, 12 second lieutenants, 1,587 enlisted men; (2) consisting of 1 colonel, 1 lieutenant colonel, 4 majors, 23 captains, 40 first lieutenants, 24 second lieutenants, 3,135 enlisted men.

Two general construction regiments, each consisting of 1 colonel, 1 lieutenant colonel, 9 captains, 18 first lieutenants, 12 second lieutenants, 1,539 enlisted men.

One water-supply regiment, consisting of 1 colonel, 1 lieutenant colonel, 9 captains, 18 first lieutenants, 12 second lieutenants, 1,539 enlisted men.

One mining regiment, consisting of 1 colonel, 1 lieutenant colonel, 9 captains, 18 first lieutenants, 12 second lieutenants, 1,539 enlisted men.

One quarry regiment, consisting of 1 colonel, 1 lieutenant colonel, 2 majors, 13 captains, 20 first lieutenants, 12 second lieutenants, 1,587 enlisted men.

One gas and flame regiment, consisting of 1 colonel, 1 lieutenant colonel, 2 majors, 13 captains, 20 first lieutenants, 12 second lieutenants, 1,587 enlisted men.

One electrical and mechanical regiment, consisting of 1 colonel, 1 lieutenant colonel, 2 majors, 13 captains, 20 first lieutenants, 12 second lieutenants, 1,587 enlisted men.

One surveying, ranging, and map service, consisting of 1 major, 8 captains, 55 first lieutenants, 42 second lieutenants, 2,024 enlisted men.

One port terminal service, consisting of 2 captains, 6 first lieutenants, 4 second lieutenants, 500 enlisted men.

Three auxiliary forestry battalions, each consisting of 1 major, 6 captains, 13 first lieutenants, 8 second lieutenants, 1,024 enlisted men.

Forty-six service battalions, each consisting of 1 major, 4 captains, 5 first lieutenants, 5 second lieutenants, 1,006 enlisted men.

Eighteen motor-truck and motor-car companies, each consisting of 1 first lieutenant, 53 enlisted men.

Ten searchlight companies, each consisting of 1 captain, 1 first lieutenant, 2 second lieutenants, 250 enlisted men.

Five ponton trains, each consisting of 1 first lieutenant, 1 second lieutenant, 170 enlisted men.

One ponton park, consisting of 1 first lieutenant, 1 second lieutenant, 181 enlisted men.

Engineer depot service, consisting of 2,395 enlisted men.

Twelve light tank companies, each consisting of 1 first lieutenant, 3 second lieutenants, 97 enlisted men.

Three engineer training regiments, each consisting of 1 lieutenant colonel, 3 majors, 19 captains, 37 first lieutenants, 36 second lieutenants, 3,058 enlisted men.

The next item in reference to the Engineer Corps is on page 57:

Engineer depots: For incidental expenses for the depots, including fuel, lights, chemicals, stationery, hardware, machinery, pay of civilian clerks, mechanics, laborers, and other employees, extra-duty pay to soldiers necessarily employed for periods not less than 10 days as artificers on work in addition to and not strictly in the line of their military duties, such as carpenters, blacksmiths, draftsmen, printers, lithographers, photographers, engine drivers, telegraph operators, teamsters, wheelwrights, masons, machinists, painters, overseers, laborers; for lumber and materials and for labor for packing and crating engineer supplies; repairs of, and for materials to repair, public buildings, machinery, and instruments, and for unforeseen expenses, \$50,000.

You are asking for \$15,000 more than you had last year. Will you please explain that?

Gen. WINSLOW. For many years the Engineer depot appropriation has run about \$30,000. That was a sort of standard amount, and it was sufficient for peace times. It had to be somewhat increased during the trouble on the Mexican border, and now it has had to be increased because of the increased size of the depot forces we have to keep. We used to have just the Engineer depot here at the Washington Barracks, and a very small depot at Fort Leavenworth, and one at Vancouver, and a small one in the tropical possessions.

Now, we have a very large depot here and we have to keep a large one on the Mexican border, and we have to keep the others up about as usual, although the increased charges at Panama and Honolulu and Manila are small.

The estimate upon which this is based is as follows: Fort Leavenworth, \$4,200; Vancouver Barracks, \$1,275.

Mr. GORDON. Where is Vancouver Barracks?

Gen. WINSLOW. It is in the State of Washington, about a dozen miles from Portland.

Mr. GORDON. Why is it called Vancouver Barracks?

Gen. WINSLOW. Because there is a little town called Vancouver near it.

The amount estimated for Fort Sam Houston is \$27,000; for Corozal, \$3,000; for Honolulu, \$2,200; for Manila, \$5,040; and for the Washington General Depot, \$7,185, making a total of about \$50,000.

Mr. TILSON. I notice you allot a large amount at Fort Sam Houston.

Gen. WINSLOW (interposing). At Fort Sam Houston, at San Antonio, we have a great deal of material accumulated there for use in case anything should turn up in Mexico; and it seems to be the policy of the department to continue to maintain that material within reaching distance of the border.

The CHAIRMAN. The next item is:

Engineer School, Washington, District of Columbia: Equipment and maintenance of the Engineer School at Washington Barracks, District of Columbia, including purchase and repair of instruments, machinery, implements, models, and materials for the use of the school and for instruction of Engineer troops in their special duties as sappers and miners; for land mining, pontoniering, and signaling; for purchase and binding of professional works and periodicals of recent date treating on military and civil engineering and kindred scientific subjects for the library of the United States Engineer School; for incidental expenses of the school, including chemicals, stationery, hardware, machinery, and boats; for pay of civilian clerks, draftsmen, electricians, mechanics, and laborers; compensation of civilian lecturers and payment of tuition fees of student officers at civil technical institutions; for unforeseen expenses; for travel expenses of officers on journeys approved by the Secretary of War and made for the purpose of instruction: *Provided*, That the traveling expenses herein provided for shall be in lieu of mileage and other allowances: and to provide means for the theoretical and practical instruction at the Engineer School by the purchase of textbooks, books of reference, scientific and professional papers, and for other absolutely necessary expenses, \$30,000.

That is the same amount you got last year for that item?

Gen. WINSLOW. It is the same as last year; yes, sir. Of course, the engineer school has been discontinued as far as the school itself is concerned. The course at the school, previous to the war, was about 18 months; and so all during the winter months we have had two classes of officers there, one class of officers entering in one October and leaving in April of the following year, about 18 months afterwards.

The last class was graduated about the middle of April last.

But there are a good many other things carried on in the school in addition to instruction. We have numerous publications on military, civil, and mechanical engineering. Then we also desire to keep up the library there, containing a great many professional works.

Then, in addition to that, there has always been carried on at the school a good deal of experimental work. We desire to carry on experiments to a greater extent than ever before, especially with regard to certain details of searchlight work. We desire to do that work at this school, because the school is here and we have the plant, and because in Washington we have the assistance of the trained physicists at the Bureau of Standards.

Mr. TILSON. Who attends the school?

Gen. WINSLOW. The regular attendants are officers of the Engineer Corps. The first service of the officers in the Engineer Corps, whether they graduate from West Point or come in from civil life, is one or two years with troops. They are then called to the engineering school here for a post-graduate course in civil, military, and electrical engineering. They take this course for 18

months. The engineer school corresponds to the Artillery school at Fort Monroe, where the Artillery officers take a special course in the more scientific matters connected with their branch of the service, and it also corresponds to the Field Artillery school at Fort Riley and to the Infantry school at Fort Leavenworth.

Mr. CALDWELL. The Engineer officers from the training camps were sent out here to the American University. What is that?

Gen. WINSLOW. That had nothing to do with the Engineer school I have been referring to.

The American University was started in the suburbs of Washington, and two buildings were erected, but the university itself has hardly yet gotten on its feet; so when we were looking around for camp sites last spring for these training-camp troops the officials of the American University offered the use of their grounds and of their buildings after they got through using them in June. We simply took the use of the ground. We built little frame cantonment buildings and have raised certain Engineer troops there. "American University" was simply the name of the camp.

Mr. GREENE. You spoke about the experimental work at the Engineer School here. Some time ago some of the officers indicated that there was difficulty in obtaining certain kinds of refractory lenses in this country. Have those difficulties been overcome sufficiently to make it no longer a question of anxiety, so far as the getting the necessary supply of those lenses is concerned?

Gen. WINSLOW. That is a question I can not answer, because the trouble you refer to pertains to the Signal Corps and the Ordnance Department.

Mr. GREENE. That thought was suggested by your reference to experiments in searchlight work carried on at the Engineer School, and I wondered whether that was connected with it, and whether you found any difficulty in obtaining your supply of those lenses.

Gen. WINSLOW. Prior to about four or five years ago all searchlight mirrors were manufactured abroad, but we took time by the forelock, and got the Bausch & Lomb people interested in their manufacture. They began, quite a number of years ago, working on searchlight mirrors, and although it delayed the turning out of certain searchlight for from six months to a year, we gave these people a large contract, and waited for them to develop searchlight mirrors. If you were at the San Francisco Fair, you may have seen one of their 60-inch mirrors, which was manufactured for us. The searchlight mirrors now used in our searchlights are all manufactured in this country.

We gave them these contracts—this was about 1910 or 1911—even though it meant a delay in completing searchlights in order to encourage the manufacture of the mirrors in this country. It is a good thing we did, because otherwise the supply would have been cut off by the war.

Mr. GREENE. Another part of the experimentation was with illuminating bombs and various other things?

Gen. WINSLOW. Yes; we had some experiments there with illuminating bombs. Through experimentation at the Engineer School, we have been developing a high-intensity searchlight which we believe is better than anything now in possession of the nations abroad. Some years ago a man by the name of Beck developed a

searchlight which gave a high-intensity arc, but that has been outdone in this country by Mr. Sperry, who is the same man who invented the Sperry gyroscopic compass, and worked on the installation in ships of gyroscopes to prevent the ships from rolling. He developed the Sperry light. We then bought a Beck light from the General Electric Co. and tested it in competition with the Sperry light at Fort Monroe about a year ago. The Sperry light was shown to be undoubtedly the better.

Mr. GREENE. As a matter of information, in case the question should be asked on the floor of the House, is it fair to say that, so far as the special and technical appliances are concerned, and all sorts of similar devices which are necessary for the Engineer Corps, you find yourselves well supplied now in this country, and there is no immediate prospect of anxiety about that?

Gen. WINSLOW. We find we can get pretty nearly all the instruments we need in this country as rapidly as we need them. The searchlight is a big item. We have part of it made by the General Electric Co.; the mirrors are made by the Bausch & Lomb people; and we have special high intensity apparatus and lamp made by the Sperry people, all in this country.

Now, we are also developing a number of sound range instruments, which we believe are better than those abroad. They are being manufactured in this country at various plants.

Mr. GREENE. But for general purposes, and so far as the satisfaction of the lay mind is concerned, your general run of useful and necessary instruments and appliances, so far as their supply is concerned, is now apparently in sight?

Gen. WINSLOW. For the Engineer service; yes, sir.

Mr. TILSON. Is there included in this item for experimental and testing work any amount for experimentation in connection with military fireworks, such as illumination rockets, flare bombs, etc.?

Gen. WINSLOW. The experimental work of this character is done at the Engineer School, but the cost of appliances of that kind is paid for out of the appropriation for the Engineer equipment of troops. We simply buy a small lot of that particular kind of bombs out of this appropriation and test them out. If they turn out well, we will buy a lot more of them.

Mr. CALDWELL. In making the estimates for the various items of your appropriation, would your estimation be increased with a substantial increase of the Army?

Gen. WINSLOW. This item for experimentation work at the Engineer School is independent of the number of men in the Army. We know about what we want to do, and we simply work in the experimental line until we get something that is satisfactory, and then the question of supplying the troops come out of another appropriation.

Mr. CALDWELL. My point is whether any of the items you have spoken about to-day would be increased materially with an increase of the Army.

Mr. GORDON. When did you discontinue this Engineer School?

Gen. WINSLOW. The class which was under way was discontinued on the 15th of April.

Mr. GORDON. How does it happen, then, that you are asking for the same appropriation, when the school is discontinued?

Gen. WINSLOW. The Engineer School has a good deal of work in addition to the mere teaching work. They do departmental work there, and publication work, the publication of books and papers.

Mr. GORDON. Those books are simply for the purpose of carrying on the school, are they not?

Gen. WINSLOW. They are also for use in connection with the school. The school is supposed to be the source of engineering information for the entire Army.

Mr. GORDON. The school has been discontinued?

Gen. WINSLOW. As a school, as far as the classes are concerned; yes. The students have been assigned to other work, and the instructors also, but there are still officers on duty at the school doing the other work at the school, and the experimental work is considered important. We desire to increase the experimental work and we hope to have the same amount of funds allotted for that purpose. Instead of using this appropriation this year for the routine expenses of the school we will use them for the experimental work.

Mr. GORDON. The amount necessary will be about the same, you think?

Gen. WINSLOW. About the same.

Mr. SHALLENBERGER. I understood you to say that these officers who have been commissioned since the war began in the Engineer Corps are not reserve officers of the Engineer Corps.

Gen. WINSLOW. They are commissioned as officers of the Engineer Reserve Corps and they are called into service with National Army units.

Mr. SHALLENBERGER. Have they the same relation in your corps that the Ordnance reserve officers or the Quartermaster reserve officers have to their respective corps?

Gen. WINSLOW. Exactly. The only difference in the status of the officers is that when a reserve officer is assigned to an Engineer unit or Engineer regiment he becomes a part of that Engineer regiment, and therefore a part of the line.

Mr. SHALLENBERGER. But in the other corps he would acquire a different status; that is, if he is in the Quartermaster Corps he would acquire a different status?

Gen. WINSLOW. Exactly.

Mr. SHALLENBERGER. You have not any distinction?

Gen. WINSLOW. No. An officer of the Corps of Engineers is a staff officer when he is commissioned.

Mr. SHALLENBERGER. I thought you did not consider that man as a member of the reserve officers of the Engineer Corps?

Gen. WINSLOW. No; they have exactly the same status as reserve officers in other corps.

The CHAIRMAN. The next item is:

Engineer equipment of troops: For pontoon material, tools, instruments, supplies, and appliances required for the use of the engineer equipment of troops, for military surveys, and for engineer operations in the field, including the purchase, maintenance, operation, and repair of the necessary motorcycles; the purchase and preparation of engineer manuals and procurement of special paper for same, and for a reserve supply of above equipment, \$135,000,000.

You received an appropriation at the last session of Congress of \$49,150,000 for this item.

Gen. WINSLOW. We were directed by the Chief of Staff to prepare this estimate on the basis of 1,612,000 men. We have assumed that

for purposes of making estimates that these 1,612,000 men would be divided into 58 divisions, and a certain number of special service troops. It is assumed that the cost of the equipment of a division is \$150,000. It is assumed that 41 of the divisions will have been equipped by the end of the fiscal year, and that the equipment of 17 will have to be purchased next year. It is also assumed that for this engineer equipment there is required a replacement of 500 per cent a year. That is what is learned from the experience of our allies in the war, that the complete equipment of an engineer division has to be replaced about five times during the fiscal year, so we are assuming we will have to replace the equipment of 41 divisions five times during the year. In the case of the 17 remaining divisions of the 58, we have to equip them during the year. It is assumed that they will average six months of existence during the next fiscal year, and allowing a replacement of 500 per cent per year, that makes a replacement of 250 per cent for these 17. The total is \$39,675,000. That is for equipment.

The CHAIRMAN. How do you arrive at the amount of \$150,000 as the cost of the equipment of a division?

Gen. WINSLOW. There is a board which has worked out exactly what each organization of the Army should have in the way of engineer equipment, and by the actual addition of these figures we get the amount, which is approximately \$150,000. We have already equipped some divisions so we know about what it will cost.

The CHAIRMAN. What would that figure out per capita?

Gen. WINSLOW. There are something over 25,000 men in a division, and it would be about \$6. per man, or slightly less than that.

All the rest of the items are figured upon Gen. Pershing's estimates, as made abroad and sent here. There is the equipment of 10 field searchlight companies, at \$60,000, for troops which are out at the front, in the front line. For the searchlights we figure the same percentage of replacement; that is, 500 per cent a year. For troops in the rear we consider that the percentage of replacement is 100 per cent per year. Starting with 10 field searchlight companies, of which 5 will be provided by the end of this year we get \$2,550,000.

Then there are 10 antiaircraft searchlight companies, at \$80,000 apiece, at a total cost of \$3,000,000. The other things under this item include the following:

Engineer equipment of troops.

	Fiscal year 1918.		Fiscal year 1919.			
	Organ- ized and equipped in fiscal year 1918.	Cost of equipment 1918.	Organ- ized and equipped in fiscal year 1919.	Cost of equipment 1919.	Cost of replac- ment 1919, notes A and B.	Total cost of equip- ment 1919, column 4 plus column 5.
58 divisions, at \$150,000 (A)..... Engineer property furnished divisional Engineer regiments, Engineer train, and line troops.	41	\$6,150,000	17	\$2,550,000	\$37,125,000	\$39,675,000
Corps troops: 10 field searchlight companies, at \$60,000 (A)..... Originally with the search- light section of the Engineer trains. Each company to have 6 24-inch searchlights, horse-drawn.	5	300,000	5	300,000	2,250,000	2,550,000

Engineer equipment of troops—Continued.

	Fiscal year 1918.		Fiscal year 1919.			
	Organized and equipped in fiscal year 1918	Cost of equipment 1918.	Organized and equipped in fiscal year 1919.	Cost of equipment 1919.	Cost of replacement 1919, notes A and B.	Total cost of equipment 1919, column 4 plus column 5.
Corps troops—Continued.						
10 antiair craft searchlight companies, at \$80,000 (A).... To handle portable antiair craft searchlights, motor-drawn. Portable equipment for each company 2 mobile antiaircraft searchlights.	5	\$400,000	5	\$400,000	\$3,000,000	\$3,400,000
10 heavy pontoon trains, at \$90,000 (A)..... Each pontoon train to consist of 3 divisions of heavy equipage and half supply division.	5	450,000	5	450,000	3,375,000	3,825,000
Army troops:						
2 regiments, gas and flame, at \$200,000 (A)..... Offensive, gas and flame.	1	200,000	1	200,000	1,500,000	1,700,000
2 regiments, mining, at \$900,000 (A)..... For tunneling and mining.	1	900,000	1	900,000	6,750,000	7,650,000
2 regiments, surveying and ranging, at \$700,000 (A)..... Topographical surveying, map reproduction, cartography, printing, map reproduction, map supply, translation of aeroplane photographs into maps, sound ranging and flash ranging.	1	700,000	1	700,000	5,250,000	5,950,000
2 regiments, general construction, at \$300,000 (B)..... Construction of cantonments, hospitals, storehouses, permanent bridges, including installation of heating plants, laundries, kitchens, etc.	1	300,000	1	300,000	450,000	750,000
2 regiments, supply, at \$300,000 (B)..... To receive, store, and issue Engineer materials in the Army zone, salvage Engineer materials from abandoned positions, and exploit local resources in Engineer materials.	1	300,000	1	300,000	450,000	750,000
2 heavy pontoon parks, at \$150,000 (A).....	1	150,000	1	150,000	1,125,000	1,275,000
2 regiments, electrical and mechanical, at \$200,000 (B)..... Installation and operation of electric light and power plants, transmission lines.	1	200,000	1	200,000	300,000	500,000
2 regiments, water supply, at \$1,000,000 (B)..... Well drilling, laying pipe lines, installing tanks, pumps, etc.	1	1,000,000	1	1,000,000	1,500,000	2,500,000
Service of the rear troops:						
2 regiments, general construction, at \$300,000 (B)..... Construction of wharves, depots, storehouses, workshops, base hospitals, permanent bridges, etc., in rear.	1	300,000	1	300,000	450,000	750,000
2 regiments, supply, at \$300,000 (B)..... Similar, to supply regiment under Army troops above.	1	300,000	1	300,000	450,000	750,000

Engineer equipment of troops—Continued.

	Fiscal year 1918.		Fiscal year 1919.			
	Organ- ized and equipped in fiscal year 1918.	Cost of equipment 1918.	Organ- ized and equipped in fiscal year 1919.	Cost of equipment 1919.	Cost of replace- ment 1919, notes A and B.	Total cost of equip- ment 1919. Column 4 plus column 5.
Service of the rear troops—Con.						
4 battalions, shop, at \$400,000 (B).....	2	\$800,000	2	\$800,000	\$1,200,000	\$2,000,000
For operation of work-shops and repair shops.						
1 regiment, forestry (B).....	1	800,000	.....	.....	800,000	800,000
2 battalions, camouflage (B)...	1	600,000	1	600,000	900,000	1,500,000
10 battalions, sawmill, etc., at \$800,000 (B).....	5	4,000,000	5	4,000,000	6,000,000	10,000,000
For installation and operation of sawmills, logging, etc.						
6 battalions, auxiliary forestry, at \$400,000 (B).....	3	1,200,000	3	1,200,000	1,800,000	3,000,000
For camp, road, and bridge work in connections with lumber operations.						
2 regiments, quarry (B).....	1	1,000,000	1	1,000,000	1,500,000	2,500,000
To supply road and railroad services.						
(regiments, highway, at \$700,000 (B).....	2	1,400,000	2	1,400,000	2,100,000	3,500,000
For the construction and maintenance of roads.						
20 companies, special trucks (31 each), at \$5,000 (B).....	10	1,550,000	10	1,550,000	2,325,000	3,875,000
10 companies, harness and wagons (61 each), at \$400 (B).....	5	122,000	5	122,000	183,000	305,000
6 regiments, standard gauge railway construction (B).....	5	100,000	1	20,000	110,000	130,000
1 regiment, standard gauge railway, maintenance of way (B).....	.....	.....	1	20,000	10,000	30,000
2 regiments, standard gauge railway, operating (B).....	1	20,000	1	20,000	30,000	50,000
1 regiment, standard gauge railway, maintenance equipment...	1	20,000	.....	.....	20,000	20,000
2 regiments, standard gauge railway, shop.....	1	20,000	1	20,000	30,000	50,000
1 regiment, standard gauge railway, miscellaneous.....	.....	.....	1	20,000	10,000	30,000
Miscellaneous trades and storekeepers, transportation and eating houses.						
3 regiments, standard gauge railway (with British Army).....	3	60,000	.....	.....	60,000	60,000
5 regiments, light railway, construction and maintenance (B)...	2½	50,000	2½	50,000	75,000	125,000
4 regiments, light, railway, operating and maintenance (B).....	2	40,000	2	40,000	60,000	100,000
2 regiments, light, railway, miscellaneous.....	1	20,000	1	20,000	30,000	50,000
Stevedores and crane operators to handle cranes and stevedore work at the ports to be operated by our transportation service.						
92 battalions, service troops.....	46	2,750,000	46	2,750,000	4,125,000	6,875,000
To furnish unskilled labor for the various services, to be attached as needed.						
Depot detachment, 32, at \$10,000. Incidental expenses of depot detachments at various camps and cantonments.	32	320,000	.....	.....	64,000	64,000
Total.....	.....	.....	.....	21,682,000	85,407,000	107,089,000
Contingencies.....	.....	.....	.....	.....	.....	27,911,000
Grand total.....	.....	.....	.....	.....	.....	135,000,000

NOTE.—(1) In this estimate the following percentages of replacement are assumed and are indicated by letters A and B: A equals 500 per cent replacement per year for equipment of troops at the front; B equals 100 per cent replacement per year for troops in rear, lines of communication, etc.

(2) The figures in the column headed: "Fiscal year 1918" do not make up a part of the estimate. They show the number of units which it is assumed will be organized before June 30, 1918. It is assumed that the cost of the equipment for these units will be paid from 1918 funds.

Mr. QUIN. What do you mean by labor troops strictly for the Engineer division?

Gen. WINSLOW. I mean service troops, labor battalions, working in connection with the Engineer troops. Each of the Engineer regiments of the rear, working on the line of communication, has along with it a number of labor battalions, and a large proportion of those battalions are made up of negro laborers.

The CHAIRMAN. General, I am going to ask you to give the committee a general statement showing what the service of each one of the technical units is, and put that in the record along with the table.

Gen. WINSLOW. The character of the service of the different technical units is shown in the first column of the table.

Mr. CALDWELL. That item is based, I suppose, on an army of 1,612,000 men?

Gen. WINSLOW. Yes, sir.

Mr. CALDWELL. If, before this bill is passed, Congress fixes the size of the Army at 3,000,000 men, or any multiple of the number of men now in the Army, we will have to increase this amount in absolute ratio?

Gen. WINSLOW. In absolute ratio, no, sir. This table shows that we expect by the end of the present fiscal year to have certain organizations equipped. If you are going to order the formation of any additional organizations, you simply have to increase the other items.

The first column is for the replacement of the divisions already equipped, or which will be equipped by the end of the fiscal year, so that for any additional troops you can simply increase the amount in proportion.

Mr. CALDWELL. I simply wanted to get in the record a statement as to whether or not the proportion would continue with each 500,000 men, or whether one additional 500,000 would be increased a certain proportion, and the second 500,000 would be the same or a different proportion. In this estimate I understand you to say that each 500,000 men would have the same proportionate increase?

Gen. WINSLOW. Except that one thing has got to be very carefully looked into. You see, we use 500 per cent replacement for the troops on the front fighting line, and only 100 per cent for the service at the rear. You have to distinguish between those, but if you divide them in the same proportion as the total, you can take the same figures.

Mr. FIELDS. What are the forestry troops for?

Gen. WINSLOW. The forestry troops are going into the lumber forests. A very large proportion of the timber over there is needed for the work in the trenches. The trenches have to be revetted, and we have to build bombproofs, and those are all made from timber cut from the French forests.

Mr. FIELDS. We are getting that timber from the forest reserves of France?

Gen. WINSLOW. Yes.

Mr. FIELDS. For this work you selected men who have had experience in that work?

Gen. WINSLOW. Yes. They are sawmill men—actual lumbermen—who have been out in the field, and we have a few foresters. The idea of the foresters seems to be to cut the forests so as to preserve them,

and the idea of the lumberman seems to be to cut as much lumber as he can in the forest.

Mr. FIELDS. If you put a man in a forest to cut timber who is not an experienced man, he will waste as much timber as he saves. It is very essential, therefore, to have practical men engaged in that work.

Gen. WINSLOW. That is the reason we have the foresters, and we also have practical lumbermen.

In connection with the organization of the troops, when the forestry troops were first started, we figured we would want a proportion of about one-third foresters and about two-thirds lumbermen, and we went to the Forestry Division of the Department of Agriculture and said to them, "Can you help us in picking out the foresters?" They were very glad to offer their services, and Mr. Graves, the Chief Forester, was commissioned as a major, and went over and stayed there several months. We have had a number of other men from the Bureau of Forestry, among them Mr. Greeley, who was one of the prominent men in the bureau. He went over there as a major and is still there. The Bureau of Forestry helped us to get these men, and we took their certificates in regard to the forestry people in lieu of the professional examination.

Mr. FIELDS. Then in selecting timber, you have inspectors?

Gen. WINSLOW. Yes.

Mr. FIELDS. How did you select the timber inspectors?

Gen. WINSLOW. Some of those were recommended by the Forestry Bureau of the Department of Agriculture, and others were selected by some of the practical lumbermen we got in first.

Mr. FIELDS. The reason I asked that question is, I was talking a few days ago with a practical lumberman who was offering his services to the Government. He is a man who gets a large salary as a lumber inspector, and I was wondering if you selected men of his class and ability as lumber inspectors, when you have an opportunity.

Gen. WINSLOW. When we have an opportunity, we do. The first forestry regiment was authorized a very few days after the first railroad regiment, and the second forestry regiment was authorized on the 27th of August, and we have since been authorized to increase its size.

Mr. FIELDS. One of the very essential things in the cutting of timber is to have men who are capable of estimating a log when they look at it. You are trying to get practical men for all that sort of work?

Gen. WINSLOW. Yes, sir.

Mr. FIELDS. A man might look at a log and cut it into something which it was not best fitted to make.

Gen. WINSLOW. We have practical mill men on that work.

Mr. FIELDS. You are trying to get practical men all the way through?

Gen. WINSLOW. Yes. Col. Mitchell is the commanding officer of the second forestry regiment, and although a large portion of the regiments has gone, he is still here, and went over the papers of the candidates. Each man who submitted a request for a commission in this regiment was asked to give a full statement of his experience, and the papers were all sent out and gone over by Col. Mitchell and his officers and we believe we have picked a good lot of officers.

Mr. CALDWELL. In connection with this lumber you are using on the other side, you say it is a part of the French forest reserve. Do we pay the French Government or anyone there for stumpage?

Gen. WINSLOW. The understanding is that we are to pay eventually for everything we use, but that is one of the questions which is to be settled after the war. It is the same way with the railroad material we are sending over to the French.

Mr. CALDWELL. Who is going to own the railroad when we get through with it?

Gen. WINSLOW. That is a question to be determined after the war.

Mr. CALDWELL. Would that railroad take care of 3,000,000 men?

Gen. WINSLOW. I do not know.

Mr. GREENE. What gauge are we following on the railroad?

Gen. WINSLOW. The gauge is the same as the French gauge, but the clearance on the bridges is a little different. Our full-sized car can not get through their tunnels and over their bridges.

Mr. MCKENZIE. Returning to the question of the foresters, are these men we are sending over designated as foresters, woodchoppers? Do they work in the timber, or are they what we understand as a forester—a man who goes through the forests and marks the trees to be cut?

Gen. WINSLOW. The enlisted men of the regiment are actual woodchoppers, and at least two-thirds of the officers are actual lumbermen. There is a certain proportion of the officers who have been selected by the Forestry Bureau to assist and to try to see that the operations are carried on with as little damage as possible to the remaining trees.

Mr. MCKENZIE. Of course, the French Government has a Bureau of Forestry, and I would assume they would be doing that now.

Gen. WINSLOW. They are.

Mr. MCKENZIE. That they would at least go into the forests and spot the trees.

Gen. WINSLOW. They are; and undoubtedly they will send some of their forestry men with our officers.

Mr. MCKENZIE. The question in my mind was whether or not the French Government would permit one of our men to go into a forest and spot the trees that are to be cut.

Gen. WINSLOW. As to the details, I am not familiar with that; but we have sent over foresters. Maj. Graves, who was the chief forester of the Department of Agriculture, is over there, with several of the other men of the forestry bureau. They have been working with the French Government.

Mr. MCKENZIE. In regard to the sawmills, have you shipped a good many sawmills to France?

Gen. WINSLOW. Each battalion is supposed to have six portable sawmills.

Mr. MCKENZIE. Each battalion of foresters?

Gen. WINSLOW. Yes.

Mr. FIELDS. What horsepower are those sawmills?

Gen. WINSLOW. We can get you that information. Each one of the battalions has its own portable sawmill and its own outfit, and this is supposed to be the sized outfit that could be operated properly

by the number of men in the battalion, with the assistance of the labor battalion that goes along with it.

Mr. McKENZIE. The question that occurred to me was whether or not those sawmills should have been purchased in France, and thus we could have saved the cost of transportation from this side.

Gen. WINSLOW. We are purchasing everything in France we can get there. We have purchasing officers abroad, and the instructions have been to do everything they can to purchase things they need abroad.

The CHAIRMAN. I will ask you to put in the record a detailed statement showing why you ask for an increase in the item for "Civilian assistants to engineer officers" from \$75,000 to \$115,000, and also include in that statement the details as to how much of the appropriation you received last year you have expended.

That brings us down to the details of the engineer operations in the field.

CIVILIAN ASSISTANTS TO ENGINEER OFFICERS.

Estimate submitted for 1919.....	\$115,000
Amount appropriated for fiscal year 1918.....	75,000

Purpose of appropriation.—Payment of salaries of civilian assistants to Engineer officers on the staffs of division, corps, and department commanders. It has been used, however, only for payment of civilian assistants to department engineers, and the estimate for 1919 includes only the estimated amount required for that purpose. The estimate for payment for civilian assistants in Europe and any others required on account of the war is included under the estimate for "Engineer operations in the field."

Basis of estimate.—The following estimates for the fiscal year 1919 have been submitted by the department engineers and form the basis of the estimate of \$115,000 submitted for the fiscal year 1919:

Northeastern Department.....	\$6,000
Eastern Department.....	35,000
Southeastern Department.....	12,000
Central Department.....	6,000
Southern Department.....	23,000
Western Department.....	9,560
Panama Canal Department.....	8,695
Hawaiian Department.....	5,300
Philippine Department.....	8,620
Total.....	114,175

Reason for increase.—The creation of two new departments (Northeastern and Southeastern) for the department engineers, of which civilian assistants must be employed. Due to the fact that these departments were created after the submission of the 1918 estimates, no provision therefor was made in the appropriation for 1918. This has caused the 1918 appropriation to be insufficient. Request has been received from the department engineer of the Panama Canal Department for an additional allotment, but it has not yet been possible to secure funds for this allotment. Another reason for the increase is that it is probable that additional funds will be required during the fiscal year 1919 on account of additional employees who will be required by the department engineers on account of extra work required in connection with the mobilization of troops, etc.

The following are the expenditures which have been made from the 1918 appropriation up to December 31, 1917:

Department engineer:	
Northeastern Department.....	\$2,592.75
Eastern Department.....	11,435.46
Southeastern Department.....	2,365.00
Central Department.....	2,409.17
Southern Department.....	7,140.13.

Department engineer—Continued.

Western Department-----	\$3, 479. 39
Panama Canal Department-----	3, 526. 12
Hawaiian Department-----	768. 87
Philippine Department (expended to Nov. 30; December report not available)-----	2, 616. 17
Total-----	36, 333. 06

Mr. SHALLENBERGER. I understand that in the case of men commissioned in the Engineer Corps of the Regular Army you require them to go to these schools, and they have to pass an examination in the schools, but that in the case of the men in the Engineer Reserve Corps you have not required them to go to a school, but they have been taken in upon certificates from the outside as to their efficiency.

Gen. WINSLOW. The law says that a candidate for admission into the Engineer Corps in the Regular Army in order to be eligible must hold a diploma showing graduation from an approved engineering school. The requirements for the reserve corps are not so severe. A man must be in the practice of engineering or some similar profession.

Mr. SHALLENBERGER. You have not had a training school to which you required the men to go?

Gen. WINSLOW. After they are commissioned.

Mr. SHALLENBERGER. But you have not required them to spend a certain number of months at a training school; you have taken them in largely upon certificates?

Gen. WINSLOW. Yes; but we try to send every man we expect to need, when commissioned, to a training camp.

Mr. SHALLENBERGER. You commission him first?

Gen. WINSLOW. If he fails to make good at the training camp, he is eliminated.

Mr. TILSON. Do you not think that is unfair to an officer? Suppose he gives up his business and gets a commission, and then he is put in a school. He is already commissioned; and if he is finally found to be not entirely fit to make a good engineer officer he is practically disgraced and sent home. Do you think that is a good way to get your officers? Why not have your training camps first and let the students go to those training camps and then commission those who pass the examinations, and do not commission a man and then send him to a school and finally dismiss him.

Gen. WINSLOW. The Engineer Reserve Corps antedated the training camps by nearly a year. Those men who had been commissioned already had taken their commissions without knowing whether the war was coming on or not. We sent them to the training camp and gave them special instruction. The question of picking out the fit was only incidental; and I may say that 85 per cent of those who went to the training camp retained their commissions.

Mr. TILSON. Why could you not have sent the other 15 per cent back home and put them on an inactive list, and not have disgraced them in the sight of their neighbors?

Gen. WINSLOW. That is what we did do in the case of the men who went to the first training camp. We sent them home and put them on the inactive list. Later the War Department gave us instructions to the effect that they did not want the list of reserve officers to be kept very large, and instructed us to eliminate those that we did

not expect to need, and so we had to vacate the commissions of those who had been tried and found wanting.

(Thereupon the committee adjourned to meet to-morrow, Thursday, January 31, 1918, at 10.30 o'clock a. m.)

HOUSE OF REPRESENTATIVES,
COMMITTEE ON MILITARY AFFAIRS,
Thursday, January 31, 1918.

The committee met at 10.30 o'clock a. m., Hon. S. Hubert Dent (chairman) presiding.

STATEMENT OF MAJ. GEN. WILLIAM M. BLACK, CHIEF OF ENGINEERS, ACCOMPANIED BY BRIG. GEN. E. EVELETH WINSLOW, ASSISTANT TO THE CHIEF OF ENGINEERS; COL. WILLIAM J. WILGUS, COL. WILLIAM H. ROSE, COL. MAX C. TYLER, LIEUT. COL. J. G. STEESE, MAJ. EARL NORTH, AND MAJ. ROSCOE C. CRAWFORD, CORPS OF ENGINEERS.

The CHAIRMAN. General, the next item is:

Engineer operations in the field: For expenses incident to military engineer operations in the field, including the purchase of material and a reserve of material for such operations, the construction or rental of storehouses within and outside the District of Columbia, the purchase, operation, maintenance, and repair of horse-drawn and motor-propelled passenger-carrying vehicles, and such expenses as are ordinarily provided for under appropriations for "Engineer depots," "Civilian assistants to Engineer officers," and "Maps, War Department": *Provided*, That in case of actual or threatened war, the Secretary of War may authorize the incurring of obligations for the purposes of this appropriation in excess of funds which may be available, but such obligations shall not exceed the immediate military necessities: *Provided further*, That when to the interest of the Government, funds appropriated under this head may be used for the purchase of options on material for use in engineer operations in the field, \$892,000,000.

At the last session of Congress, you got an appropriation of \$280,800,000 for this item. Will you please explain the reason for the large increase you are asking for?

Gen. BLACK. Mr. Chairman, this amount is based on the best estimates we can make, based on the requisitions that were sent from abroad and the experience of the English and the French as to the cost of their operations, and the cost of materials in this country. It is necessarily purely an estimate, because no man can by any possibility tell how much the operations in the field will cost.

I will give you a few of the items on which this estimate is based and you can see how difficult that is. Take the first one, for instance, 500 standard-gauge regular locomotives, and the second one, for 500 60-centimeter locomotives. The 60-centimeter locomotives are the little narrow-gauge locomotives that carry munitions and supplies from the railhead of the standard-gauge road right up to the trenches.

You will remember in the recent fight when Gen. Byng made his great advance, the following day you saw something about some of our engineers having gotten into it. As a matter of fact, they had carried the narrow-gauge railroad so close to the rear of the British lines that when the Germans broke through and came around our fellows were caught in there. That is what our narrow-gauge line is.

There is a whole lot of work it has to do, carrying supplies from the railhead and passing to all parts of the trenches for the quick supply and carrying up of the different materials. The standard-gauge locomotives are for our own use.

This estimate covers what we need. The railroad item amounts to a very large proportion of the estimates. It includes freight locomotives, freight cars, all kinds of track materials and equipment for the maintenance of the road, and fuel. We have to build wharves and lighters, too.

The CHAIRMAN. Can you give the committee substantially the total appropriation for railroad operations over there?

Gen. BLACK. That amounts to \$224,020,000.

The next large item is electrical equipment. There is a very large use made of electric lighting, even clear up at the front. The dugouts are all lighted by electricity. There is electricity used for all sorts of purposes, and the expense of that is a great deal. The item for cantonment lighting is quite large.

The CHAIRMAN. What is the total amount of the item for electrical equipment?

Gen. BLACK. That is \$22,000,000. I can give you a detailed copy of all this, if you wish it. I have here an itemized statement covering all the items.

The CHAIRMAN. We will be glad to have that.

Engineer operations in the field.

	Fiscal year 1918.		Fiscal year 1919.			
	Organized and equipped in fiscal year 1918.	Cost of equipment, 1918.	Organized and equipped in fiscal year 1919.	Cost.	Replacement and maintenance.	Total.
New railway equipment (this is estimate of director general of military railways and is based on assumption that 9,000,000 tons of freight will be delivered at ports in France for transportation by rail to the front):						
500 standard-gauge locomotives.....				\$23,000,000		\$23,000,000
500 60-cm. locomotives.....				5,000,000		5,000,000
30,000 standard-gauge freight cars.....				81,000,000		81,000,000
6,000 60-cm. freight cars.....				6,000,000		6,000,000
150,000 tons track materials with switches, etc.....				10,000,000		10,000,000
500 miles 60-cm. track.....				4,700,000		4,700,000
150 miles 40-cm. track.....				500,000		500,000
Water station equipment.....				200,000		200,000
Maintenance of all railway equipment:						
1,500 standard-gauge locomotives, at \$2,000.....					\$3,000,000	3,000,000
900 60-cm. locomotives, at \$2,000.....					1,800,000	1,800,000
40,000 standard-gauge freight cars, at \$50.....					2,000,000	2,000,000
9,500 60-cm. freight cars, at \$200.....					1,900,000	1,900,000
Maintenance, repairs, replacements, plant, tools, steam shovels, locomotive cranes.....					10,000,000	10,000,000
Fuel, 1,500 standard-gauge locomotives and 900-cm. locomotives.....					53,500,000	53,500,000
Lubrication, locomotives and cars.....					270,000	270,000
Haul over French lines to American base, 9,000,000 tons, at \$1.25 per ton.....					11,250,000	11,250,000

Engineer operations in the field—Continued.

	Fiscal year 1918.		Fiscal year 1919.			
	Organ- ized and equipped in fiscal year 1918.	Cost of equipment, 1918.	Organ- ized and equipped in fiscal year 1919.	Cost.	Replace- ment and mainte- nance.	Total.
Shop equipment..... New equipment and mainte- nance shops and engine termi- nals.				\$5,400,000		\$5,400,000
Wharves and floating equipment..... For handling equipment and supplies shipped to A. E. F.		\$5,000,000		15,000,000	\$3,000,000	18,000,000
Electrical equipment..... Engineer department is to furnish all electric lighting and power.		10,000,000		20,000,000	2,000,000	22,000,000
375 hospital groups, 1,000 bed units, at \$350,000..... Includes cost of buildings, lin- ing, rent of land, etc. Estimate of number required based on request from Surgeon General to furnish one bed for every four men.	75	36,250,000	300	105,000,000	10,500,000	115,500,000
58 cantonment groups, at \$5,500, 000, with land..... One cantonment group for each division; estimate in- cludes rent of land.	17	93,500,000	41	225,000,000	22,500,000	247,500,000
Embarkation depots in United States..... For office rent and supplies, erection and lease of storehouses, piers, wharves, purchase of trucks, derricks, cranes, lighters, etc., for handling material.		5,000,000		6,000,000		6,000,000
Storehouses and depots in France..... Instruction in engineer field opera- tions in United States at camps and cantonments.....		10,000,000		25,000,000	2,500,000	27,500,000
Add for payment of civilian em- ployees in France.....		800,000		1,000,000		1,000,000
All supplies for operation of special services except railroads.....		500,000		500,000		500,000
Initial and automatic supply based on American and foreign requisitions.		125,000,000		230,000,000		230,000,000
To provide motor transportation for the various services, includ- ing railway department:						
2 companies, ½-ton trucks (30 each), at \$800 (B).....	1	24,000	1	24,000	36,000	60,000
6 companies, 1½-ton trucks (30 each), at \$2,000 (B).....	3	180,000	3	180,000	270,000	450,000
12 companies, 3-ton trucks (30 each), at \$4,000 (B).....	6	720,000	6	720,000	1,080,000	1,800,000
6 companies, 5-ton trucks (30 each), at \$6,000 (B).....	3	540,000	3	540,000	810,000	1,350,000
2 companies, limousines (30 each), at \$5,000 (B).....	1	150,000	1	150,000	225,000	375,000
2 companies, light all-weather (30 each), at \$1,000 (B).....	1	48,000	1	48,000	72,000	120,000
2 companies, light touring (30 each), at \$800 (B).....	1	24,000	1	24,000	36,000	60,000
4 companies, motorcycles (30 each), at \$400 (B).....	2	24,000	2	24,000	36,000	60,000
Total.....				765,010,000	126,785,000	891,795,000
Add for requirements which would have existed without present war.....						205,000
Estimate submitted						892,000,000

NOTE.—In this estimate the following percentages of replacement are assumed, and are indicated by the letters A and B: A equals 500 per cent replacement per year for equipment of troops at the front; B equals 100 per cent replacement per year for troops in rear lines of communication, etc. The figures in the column headed "Fiscal Year 1918" do not make up a part of the estimate. They show the number of units which it is assumed will be organized before June 30, 1918. It is assumed that the cost of the equipment for these units will be paid from 1918 funds.

Gen. BLACK. The next large item is for 375 hospital groups of 1,000 bed units each, and that amounts to \$115,500,000.

In regard to those hospitals, we had some months ago a hurried call from Gen. Pershing to ship over at once in knocked-down state portable buildings for the construction of the hospitals. We got up some very good plans, which had been submitted to and approved by the Surgeon General. But before we awarded the contract for those things, because of the trouble with shipping, Gen. Pershing told us to hold up on that for the present, that the present needs could be taken care of by the use of the existing buildings in France which they themselves had been fitting up for hospital purposes. So that, for the use of the small Army we have over there, we have not sent any portable buildings from this side, but they are buying the portable buildings in England and having them sent over to France.

Mr. McKENZIE. General, we were told on yesterday that we were sending over foresters and lumbermen to cut the timber we will need in France, and that arrangements had been made whereby they could acquire this lumber. What is the reason for sending portable buildings over from this side, or from England, if we can acquire lumber in France?

Gen. BLACK. They can not get enough there. We are buying lumber from other sources also.

There is an enormous amount of lumber needed, apart from that. There is a great deal of lumber needed in the trench work and in the dugouts. Then also a great deal of lumber is needed for crossties, and so we are trying to get the lumber we need as best we can from all sources from which we can get it.

Mr. FIELDS. You need also some seasoned lumber?

Gen. BLACK. That is required for some purposes.

Mr. GREENE. What is the effect on the lumber used in the trenches, as to its splintering in action, or is your lumber massed in the trenches?

Gen. BLACK. The lumber in the trench proper, used for revetment, is in small pieces, and it is used in such a way that it can not splinter very badly. It would rather break in small pieces. So far as the dugouts are concerned, the roof of the dugout is made in three or four layers. The lower part might be of railroad iron, and then a layer of lumber, and there would be a layer of broken stone, or something which would cause a shell to explode before it gets down to the lumber. The sides of the trenches are revetted with lumber. Then the galleries of the mines have to be lined with lumber. There are infinite uses for lumber over there.

Mr. GREENE. The suggestion comes from experience with the old wooden ships, and the practice of clearing away all the timbers and things of that sort when she is clearing for action. I wondered whether the use of concrete, which has taken the place of wood, had gone as far as it could, and displaced lumber as far as possible.

Gen. BLACK. Yes; as far as it can. But concrete, where it is exposed to shell action is a dangerous thing, because when hit the pieces of concrete fly in all directions, and you have a separate missile in each piece of concrete. As a general rule, concrete is rather heavy for revetment work.

Mr. TILSON. Are not the trenches revetted with rather small sized and light material?

Gen. BLACK. As far as possible.

Mr. SHALLENBERGER. You say this item includes an amount for 375 hospitals with 1,000 beds in each?

Gen. BLACK. 375 hospital groups, of 1,000 bed units each.

Mr. SHALLENBERGER. How many beds does that mean?

Gen. BLACK. That means 375,000 beds, at a cost of \$350,000 for each unit. That includes everything.

The CHAIRMAN. You have 75 either constructed or under construction now, and you propose to construct 300 more?

Gen. BLACK. This is the number required for an army of a million and a half men, and the percentage of beds is based on the percentage used by the French and English, in comparison with the number of men in their offensive forces.

The CHAIRMAN. This estimate is based on 1,500,000 men?

Gen. BLACK. Yes, sir.

Mr. OLNEY. We actually have locomotives and freight cars in France?

Gen. BLACK. None of our own freight cars have gone over, but some of the locomotives are actually there.

Mr. SHALLENBERGER. What do you estimate as the cost of each locomotive?

Gen. BLACK. The original locomotives we got cost about \$45,000 apiece. I know we got them very cheap.

Mr. SHALLENBERGER. Is that a fair price?

Gen. BLACK. We got a low rate. I have had the great advantage of having with me Mr. Samuel Felton, of the Chicago Great Western Railroad. Mr. Felton, by his intimate knowledge of railroads and of the different facilities for the manufacture of railroad material, has succeeded in getting prices which have saved us near \$31,000,000 over the current prices.

Col. TYLER. The locomotives average about \$45,000 apiece. There is a little difference in the price of locomotives made by the American Locomotive Works and the Baldwin Locomotive Co.

Mr. LUNN. What is the difference between the average price which the American Locomotive Works have been getting and what you paid them for these locomotives?

Col. TYLER. We got the locomotives about \$1,500 cheaper than the market price, due to arranging the contract in such a way that when all the material for the locomotives was delivered the company would get paid for that material. Then, when a third of the locomotives had been finished and the material for all of them had been delivered, they received a payment of that proportion of the total value of the order, and when the order was filled they got payment for all of them, so that the result of that was that the company did not have to borrow so much money as they would ordinarily have to borrow, and that reduced the price of the locomotives to the Government.

Gen. BLACK. We saved the interest on the money the company would have had to pay.

Mr. LUNN. The stock of the American Locomotive Works has been going up because of the orders they have had for munitions. Their great profits have come through the making of shells; and I was

wondering whether they were giving you a genuinely low price or simply reducing the price of the locomotives by the amount of interest they saved.

Gen. BLACK. Here is a note I have on that subject:

By adopting an American design for 150 of the first 300 locomotives ordered, and by minor changes in specifications in all of them, and by allowing partial payments to the manufacturers for materials delivered in the works, a saving was made on the first 300 locomotives of \$1,050,000.

Mr. GORDON. I understood you to say your estimate for hospital facilities in France was based upon the losses of the allies since the commencement of the war.

Gen. BLACK. Not since the commencement of the war. The experience of the allies showed that for so many thousand men in active service at the front so many beds are required.

Mr. GORDON. Is it not a fact that until very recently, the allies having been short of artillery and of all other essentials of war, that their losses have been away out of proportion to their recent losses?

Gen. BLACK. No, sir; that was only at the very first. Since they have been digging in that has not been the case so much. What the adequate supply of artillery has done has been to make it possible for them to make offensive operations successfully and with less losses than they had previously had.

Mr. GORDON. Is it not a fact that the Artillery is used for repelling attacks?

Gen. BLACK. Where you can do that; yes.

Mr. ANTHONY. Your estimate of \$115,000,000 for hospital facilities is based on an Army of 1,500,000 men?

Gen. BLACK. Yes.

Mr. ANTHONY. You will not build those buildings in advance of the proportion required for the number of men in the field?

Gen. BLACK. They will be built in advance, so that they will be ready when the men get there.

Col. ROSE. The materials will be purchased in advance. To get the materials delivered is a matter of some months.

Gen. BLACK. Most of the amount of the estimate will be expended by three persons, one of whom we sent as the purchasing agent or disbursing officer of the sums which Gen. Pershing requires for the purchase of materials abroad. In the second place, the locomotive materials and machinery, which are purchased through Mr. Felton, are paid out of this, and all the rest is paid for purchases made through Col. Rose.

I want to show you, gentlemen, what we have had to do in order to do this work. We have had to expand. At the beginning of the war in the office of the Chief of Engineers there were 8 officers and 14 civilians; at present there are 31 officers and 180 civilians. In the office of Director of Military Railroads at the beginning of the war there was 1 civilian. There are now in that office 41 officers, 11 enlisted men, and 28 civilians.

In the purchasing office at the beginning of the war there was 1 officer and 20 civilians. At present there are 86 officers, 133 enlisted men, and 257 civilians. At the engineer depots at the beginning of the war there was 1 officer and 20 civilians. At present there are 17 officers, 65 enlisted men, and 1,839 civilians. That expansion is nec-

essary, and as the work becomes greater we have to expand more. Our experience in this war has been that the surest way of requiring more expansion in the way of officers and men is to make a table and say that is enough. The next day you have to change your table.

Mr. McKENZIE. If you will explain briefly the necessity of having so many officers in comparison with the number of enlisted men and civilians, I think it will be a good thing to do.

Col. ROSE. I can explain that, so far as the purchasing division is concerned. The enlisted men that have been mentioned are enlisted men of the engineer depot detachment which was organized to enable us to draw from men in the draft the men for special clerical duties, whom we were not able to get through the Civil Service Commission. A good many of the civilian employees we took on we are about to lose as soon as they are drafted, and we were not able to get them exempted because they occupy clerical positions.

The Civil Service Commission has literally been swamped with demands for employees, and it is impossible for us to get the class of employees we require from the Civil Service Commission. The educational examinations which they hold do not produce the class of men we must have.

In connection with the whole operation of our depot system, for some months we were tremendously handicapped by the impossibility of getting the civilian assistance we required. So the engineer depot detachment was formed, authorized by the Secretary of War, and formed from men specially selected, who had been drafted, and who were at the various cantonments, and we were also allowed to have men inducted into the service, who had been drafted but not yet called.

That depot detachment was divided among the various depots. Some of those are enlisted as enlisted men in the Engineer depot, and some of them are in our own purchasing office. They are also distributed among all the cantonments and subdepots, where we sent engineer material. The organization of that depot detachment has been our salvation, so far as getting skilled civilian assistance is concerned.

We can get accountants of experience in handling property accounts, and we can get men who have worked for railroads and manufacturing concerns, and expert stenographers, who know the technical terms, and the enlisted men referred to are men used in those capacities and are members of the engineer detachments.

The officers engaged in that work are men who are actually experienced in the work of the purchasing of this material. They must be men of experience, who can take a cablegram and can interpret it in such a way that our manufacturers can understand it, and can write specifications. For instance, we will get a demand from France for a certain quantity of a certain article, that will just give the general dimensions. We have an officer who will write the specifications for that. Then our purchasing officers must negotiate with the manufacturers, and they issue their proposals for bids from those specifications, and get the representatives of the manufacturers here to handle the engineering and financial end of the purchasing, and the rest of it is handled by clerks. A very large number of officers is required for that. Our purchases are running into a million dollars a day.

They are also used for inspection duty at the factories. Of the total number of officers shown, perhaps 30 are located at different centers of production. For instance, at Schenectady, N. Y., we have a force of inspectors located there to inspect the material we get from the General Electric Co.'s works. We also have inspectors at Erie, Pittsburgh, Cleveland, New York, and Norfolk. Some of that material is inspected at the depots.

Mr. McKENZIE. These men are attached to these specific places and are not sent all over the country?

Col. ROSE. Yes. I think there are not over 30 officers engaged in that duty. The inspection duty is now enormous, considering the great number of purchases we have to make. The bulk of our inspection work is now done through the organized civilian agency of Robert W. Hunt & Co., who are inspectors of years of experience and whose services are largely employed by civilian engineer organizations. They have a trained force of about 1,400 inspectors, and they have offices in the principal cities of the United States, which are centers of the territorial district of their inspection service.

Early in the war we saw that we would be swamped so far as the inspection service was concerned if we tried to train our own men for that duty, because of the number of men that would be required and the nature of the training. So we made a very satisfactory arrangement with the firm I have mentioned, so that their whole inspection force is at our call, and we have gotten very satisfactory results from them.

Mr. SHALLENBERGER. Are those men commissioned?

Col. ROSE. No; they work as civilians and we pay them on a per diem basis. In a few cases we have brought in specialists.

The head of my financial department is a young man at the head of the firm of B. H. Namm & Co., which has the third largest department store in Brooklyn, N. Y. He is commissioned in the Engineer Reserve Corps as a captain. He is at the head of my financial department and he handles the checking of all the vouchers and the comparison of the vouchers with the inspector's reports and the preparation of the vouchers and the rendering of payment.

In the case of these partial advance payments that were arranged with the locomotive manufacturing companies in order that we could make a saving of \$1,000 on each locomotive, which was the proposition they offered us in case we could arrange such a system, when the representatives of the Baldwin Locomotive Works and the American Locomotive Works come to our office with their vouchers, they take the checks back in their hands. The payments are made within 30 minutes after the vouchers get in our office. That work is done promptly, and the representatives of the locomotive manufacturing companies go away with the checks in their hands, and in one case the amount paid was \$5,000,000 in a single check.

Mr. SHALLENBERGER. Is that still done?

Col. ROSE. Yes, sir. Moreover, Capt. Namm has organized the financial division, so that we are now taking advantage of the manufacturers' discounts, and we have saved \$60,000 in three months by prompt payment. The manufacturers told us if we would make prompt payments they would give us their regular manufacturers'

discounts, and we make special arrangements to get the money into their hands.

Mr. FIELDS. I believe it was stated awhile ago that we saved \$1,500 on each locomotive by reason of this contract, and I think Col. Rose just stated that we saved a thousand dollars.

Col. ROSE. I think the figure is a thousand dollars.

Gen. BLACK. We have Mr. Felton's statement that on the first locomotives ordered we saved \$1,050,000.

Col. ROSE. Only a part of that saving was made by changes in the designs and specifications, which made more economical methods of manufacture possible, and \$1,000 of it was saved by making this provision for partial payment.

Mr. FIELDS. You figure that the total saving would average a thousand dollars?

Col. ROSE. No; the total saving amounts to about \$3,000 per locomotive, of which \$1,000 is represented by the saving effected by the making of the arrangement for the partial payment. We protect the Government in this case, and actually take title to the material that is delivered at the factory. The first payment is made when all the essential parts of the locomotives, such as boilers, side frames, wheels and axles, and the other essential parts of the locomotives—we have listed about six essentials parts—we make the first payment when the material for one-third of the locomotives has been delivered to their works, and the machine work has actually begun. Then we take title to all the material that has been delivered. The second payment is made on the completion of the first locomotives, and again we take title to all material in their works. The final payment is made upon the completion and delivery to the representative of the Government of the first locomotive. I think you will find, if you ask the American Locomotive Co., that they are exceedingly pleased with the arrangements for payment that has been made.

Mr. LUNN. Those locomotives become the property of the Government?

Col. ROSE. They are the property of the Government.

Mr. SHALLENBERGER. The fact that you have built this railroad has impressed the members of the committee, but I find that we are spending very little of this money for building a railroad, and that the most of the money is for equipment.

Gen. BLACK. There is a great deal for track. We bought 102,000 tons of rails.

Col. ROSE. There seems to be a misunderstanding among the members of the committee in reference to this railroad. We are not building any railroad in France.

Col. WILGUS. This is for rehabilitating railroads.

Mr. SHALLENBERGER. Your statement shows only \$10,000,000 for the track material, switches, etc., and you have an item of \$4,700,000 for 500 miles of 60-centimeter track and \$500,000 for 150 miles of other track and \$200,000 for water equipment. That is only about \$24,000,000 of the entire amount of \$892,000,000, and it seems that you are having your greatest trouble in getting 30,000 freight cars and the 1,500 locomotives.

Gen. BLACK. We have the items set out in detail.

Mr. SHALLENBERGER. The question with me is whether you are going to spend this money to build a railroad. You are going to have

difficulty, apparently, in getting rolling stock, and you have to get that in this country.

Gen. BLACK. We will take such as we can rehabilitate in France.

Mr. SHALLENBERGER. Yet you have got to build your freight cars over here and the engines you want and you have to transport them to the other side before you have a railroad ready to run.

Gen. BLACK. No, sir; because we are using the French equipment—as much as possible of the French equipment as we can repair—and will take that from our needs here.

Mr. SHALLENBERGER. Are you not buying locomotives in this country?

Gen. BLACK. This is the estimate for the next fiscal year. That is the estimated amount we will have to buy. We have bought already some standard-gauge locomotives in this country.

Mr. SHALLENBERGER. Those you have bought you will have to transport to the other side?

Gen. BLACK. Yes; we are trying to get that to the minimum.

Mr. SHALLENBERGER. You have an item here for \$225,000,000 for cantonments. Do you expect to house our troops in cantonments on the other side?

Gen. BLACK. We will have to do that with all of the Army except those who are on the firing line.

Mr. SHALLENBERGER. Do the English and the French house their troops in cantonments?

Gen. BLACK. Yes; the type of building we will build is based on the French type, the latest model we could get, with some improvements.

Mr. SHALLENBERGER. I understood they housed their troops by billeting them.

Gen. BLACK. Where they can.

Mr. SHALLENBERGER. I talked not long ago to a French officer about the training camps over there, and he told me they did not have training camps such as we have, but their training was practically done in the field, and he showed me pictures, and he explained to me that they did not have the lumber with which to build the cantonments, and they did not have the tentage, and the only troops who had tents were those who were brought from Africa, and that the general practice, so far as the troops of the European countries are concerned, is not to try to house them in cantonments, because they could not get the lumber with which to build the cantonments.

Gen. BLACK. Those troops have to be housed.

Mr. SHALLENBERGER. It is not possible to avoid this expense of housing them in cantonments, because we have here?

Gen. BLACK. We are not fighting the war from this side. Gen. Pershing is doing that. We do not send a thing over there that he does not request. At the present time the troops are mostly billeted, and as far as they can be billeted they will be. But we have to pay for that. That expense comes out of this appropriation. This would include anything that has to be done. It is intended to cover the whole question of housing troops.

Mr. CALDWELL. I have heard we even had to pay rent for the trenches. I did not believe that story when I heard it, and I would like to know what you know about it.

Gen. BLACK. I do not think that is the case. Col. Wilgus has just returned from France, Mr. Chairman, where he has been the assistant to Gen. Atterbury, the director general of transportation in France. He is thoroughly familiar with this particular subject, and I am sure he can give the committee some valuable and interesting information in regard to it.

The CHAIRMAN. Colonel, what was your position before you came into the Army?

Col. WILGUS. My experience goes back to 1885, when I started in the West, building the railroad which is now the Chicago Great Western Railroad, and building quite a number of railroads in the West, near St. Joseph, Mo., and Fort Leavenworth, Kans.; then I built a belt line around the city of Chicago and located railroads in northern Minnesota, in what are now practically the mining regions there. Then I came back to my native East as engineer in charge of the rehabilitation of the Rome, Ogdensburg & Watertown Railroad, and at the same time building a railroad known as the terminal railroad, around Buffalo. Then I was made chief assistant engineer of the New York Central, and then engineer of maintenance of way of all the New York Central lines. Then I was made vice president of the New York Central, and incidentally built the Grand Central Terminal and had charge of laying out the plan for the operation of its lines in Pennsylvania, New York, and New England.

We are building no railroads, as such, in France. We are extending or rehabilitating the existing lines of railroads, of which there are two principal stems. Those lines we propose to operate.

We do not propose to build any new construction on those lines, but have put a lot of work on the existing lines of railroads and will continue to do so, in the way of building connections and double tracks and some switching yards, engine terminals, and other similar facilities needed for use in running our cars over the French railroads. The French will continue to administer the railroads. They will run their own military trains and their regular civic traffic over them, and we will be permitted to join the procession with our trains, manned by our men, and operated over those two principal routes in the same way as is done in the United States when one railroad will have trackage routes over another road.

Mr. GARRETT. And France is using the same trackage with whatever equipment they have?

Col. WILGUS. Precisely.

Mr. GARRETT. How many engines has France operating over these two roads?

Col. WILGUS. I could not say how many they have on these two routes we propose to use.

Mr. SHALLENBERGER. The whole system is under the command of Gen. Atterbury?

Col. WILGUS. He is Director General of Transportation.

Mr. SHALLENBERGER. He is a railroad man who was brought into the service since the war?

Col. WILGUS. He went to France in September. I was there in May and handled things until he arrived.

Mr. SHALLENBERGER. He is a thoroughly practical railroad man?

Col. WILGUS. Absolutely. He is one of the ablest railroad men in the United States.

Mr. McKENZIE. What is the standard division in France?

Col. WILGUS. You mean as to length?

Mr. McKENZIE. Yes, sir.

Col. WILGUS. They vary from 50 to 100 miles.

Mr. McKENZIE. That is one thing a man should keep in mind when speaking about the engines, because every division is practically a separate railroad.

Col. WILGUS. Precisely; and the engines are not always working. They require inspection and repairs.

Mr. McKENZIE. On those roads over there there would be six divisions?

Col. WILGUS. More than six divisions.

Mr. QUIN. How long is it going to take to have our trains running as you want them?

Gen. BLACK. That is again the question of transportation. Everything hinges on the shipping. Water transportation is the main question. It all depends on how fast we can get the ships.

Mr. QUIN. We have had a good many statements before the committee in regard to the building of docks and wharves on the other side. What is your judgment as to the time it will take you to get the wharves and docks ready to receive the supplies?

Col. WILGUS. So far as the ports are concerned, we are not at all in bad shape at the present time.

Mr. QUIN. Will you not have to have the wharves and docks ready to receive the ships?

Col. WILGUS. They are ready.

Mr. CALDWELL. In shipping cars over, will they not take up a great deal of space for their weight?

Gen. BLACK. They are knocked down and set up on the other side.

Mr. CALDWELL. They are specially built cars for this particular purpose?

Gen. BLACK. They are specially built cars for this particular purpose and they differ in certain particulars from our freight cars, because of the French clearances, they are different from ours because of the military needs.

Col. WILGUS. And also the French couplers, and every fifth car is fitted with a box in which a brakeman rides. In their general appearance they are the same as our medium capacity freight cars.

Mr. CALDWELL. Are they built on the foot and inch basis, or on the metric system basis?

Col. WILGUS. They are built according to our American standards.

Mr. CALDWELL. But their cars, built on the other side, are built on the metric system, are they not?

Col. WILGUS. Yes, but everything is made so that it fits.

Mr. CALDWELL. Although the systems are different you get them close enough together so that the play will take care of itself?

Col. WILGUS. Absolutely. They are all adjusted to their clearances and their gauges.

Mr. CALDWELL. You do not contemplate any trouble over that?

Col. WILGUS. We do not expect any trouble on that account.

Mr. CALDWELL. Is the width of the track the same?

Col. WILGUS. There is a difference of three-sixteenths of an inch.

Mr. CALDWELL. That does not amount to anything in a practical way?

Col. WILGUS. It does not make any practical difference. We are building our cars and locomotives so that they will accommodate themselves to the French gauge.

Mr. CALDWELL. How wide are you building them?

Col. WILGUS. They are 4 feet 8½ inches.

Mr. SHALLENBERGER. Who is going to operate the railroad after we get it in France; the French or the United States?

Col. WILGUS. Primarily, the railroads there will be under the administration of the French Government and the civil companies, and we will come in and operate under trackage rights, with our officers in parallel with their officers. At every place where there is a French division superintendent we will have an American officer at his elbow, and we will keep in touch with our trains, manned by our men.

Mr. SHALLENBERGER. I have been told that the French railroad system has been a very poorly operated system and has not been kept up as well as the railroad systems of England or Germany, and I wondered whether or not that was a fact, or whether you were going to remedy that by American assistance. Is it not a fact that the French railroad system has gone to pieces?

Col. WILGUS. No, sir. We have a very high admiration for the way in which the French have been managing their railroads under the very trying conditions which have existed, short of men and material, and on an average they have kept their railroads running better than ours, as regards time.

Mr. GARRETT. When we get our full equipment there, how much equipment will France be operating as compared with what we are operating?

Col. WILGUS. I should say on part of the routes the number of trains will be about alike. In other parts France will have very much in excess of ours, so far as the matter of trains is concerned.

Mr. GARRETT. On a general average what would you say?

Col. WILGUS. On a general average I should say we will be running from 50 to 100 per cent more than they would.

Mr. GARRETT. At least two to one?

Col. WILGUS. On many portions of the roads.

Mr. GARRETT. Do you expect any trouble as to priority of trains over there?

Col. WILGUS. No; for the reason that they have a very simple and admirable system, in that they establish what are called marches. If they say they can run their trains 20 minutes apart, that will be three trains an hour, or 72 trains per day that it will be possible to run. Then they call that a 72-marche railroad, and they would give us the right to occupy marches 12, 16, 19, and 26, say, and we would have a right to join the procession and take our place in those marches. We expect no trouble in doing that. Their aim is the same as ours. We have found them to be very cooperative in that respect.

Mr. ANTHONY. What is the custom on American railroads in reference to the supply of freight cars? How many idle freight cars or cars that are not in transit are allowed to each car that is loaded and in transit?

Col. WILGUS. That would be a rather hard thing to state accurately, except that I can say in the United States the average number of miles per day made by a freight car is only 25 miles in the 24 hours, or about a mile per hour per day on the average.

Mr. ANTHONY. What number of hours is occupied on the sidings in the process of loading and unloading? What proportion should be maintained in excess of the number in actual use?

Col. WILGUS. I should say probably five times as many; in other words, about 20 per cent of them.

Mr. ANTHONY. Counting on the wastage and destruction of a certain percentage, what percentage of wastage do you figure in this number of freight cars?

Col. WILGUS. We have not figured on any wastage, except that I have added 20 per cent to the actual figures that I arrived at as being actually needed for contingencies, and those contingencies would cover such things as wastages.

Mr. ANTHONY. You stated that the prime necessity at this time is ships.

Col. WILGUS. Yes.

Mr. ANTHONY. Did you find any congestion in the water terminals on the French side?

Col. WILGUS. Yes.

Mr. ANTHONY. What was the cause of that?

Col. WILGUS. Lack of cars principally.

Mr. ANTHONY. On the rail lines?

Col. WILGUS. Yes.

Mr. ANTHONY. The principal thing you need now is ships?

Col. WILGUS. Yes.

Mr. ANTHONY. What arrangement are you relying on to furnish you the additional ships you need?

Gen. BLACK. That is a matter that belongs to Gen. Goethals.

Mr. ANTHONY. Does the force of the Engineer Corps have charge of the unloading of ships on the other side?

Col. WILGUS. Yes.

Mr. ANTHONY. And the Quartermaster Department has charge of the loading of the ships on this side?

Col. WILGUS. I believe so, although there I am stepping beyond my own bailiwick.

Mr. ANTHONY. Would it facilitate the handling of the business if one department had charge of both ends of it?

Col. WILGUS. That has been my own personal view. It may be that others in the Army do not agree with me, but I felt that it would be better to have some common head or central administration on both sides.

Mr. ANTHONY. Is it considered to be part of the work of the Engineer Corps of the Army to load and unload ships?

Gen. BLACK. Before this war started the operation and the construction of military railroads in the field of operations was assigned to the engineer department.

When the war started, Gen. Sharpe, then the head of the Quartermaster's Department, requested that in order to get everything simplified, the whole of France should be considered the field of operations, and at that time an agreement was made with the Engineer Department to build the ports and port facilities, and that the unloading should be done by the Quartermaster's Department and therefore the stevedore regiments have been raised by the Quartermaster's Department.

Afterwards, Gen. Pershing found that it would be more convenient to have the whole of that work in France put under the transportation department, which is a separate department from the Engineer Department, but is under its supervision; we attend to the things for that department on this side. We make the estimates and furnish the materials they ask for.

Mr. ANTHONY. What is your opinion about it? Should that work of loading and unloading be in charge of the same branch of the Army?

Gen. BLACK. I think the whole matter is in process of complete settlement now.

Mr. ANTHONY. With the idea of putting it under one head?

Gen. BLACK. No, sir. I do not think it is necessary. If we have the proper supply of stevedores on both sides, it does not make any difference what head it is under. The present arrangement seems to be working out now.

That question of stevedores at the port of embarkation has been one that they have been troubled about a good deal.

Another question that comes in that adds to the difficulty is the question of priority of shipments. That can not be settled by any one except by the man in supreme authority over everything. He would know whether rations are more needed than construction materials. As a general proposition the question of priority of shipment is settled by cablegrams received from Gen. Pershing which tell his greatest needs, and then those cablegrams are put before an assistant chief of staff. Gen. Goethals is now acting in that capacity, taking advice from the other advisors of the Chief of Staff.

He then assigns to the Engineer Department and states to us that we can have so many thousand tons of embarkation facilities. Then we decide, on the basis again of the requisitions for France, which of the things they have asked for are the most needed. I do not think you can simplify it any further. I do not think it makes any particular difference one way or the other, if the work is well done, and I think it will be well done.

Mr. McKENZIE. I would like to ask a question in regard to the engines and cars. You have described very fully two main lines of railroads which you expect to utilize, and you have also stated that we have other ports where we land material and troops. Is your purpose to use any of those engines and cars on the lines of railroads communicating with the other ports?

Col. WILGUS. Yes; to this extent. I was on the commission that first was sent to England and France in May to see what the needs were of the English and French and to find how we might best assist them. We found from the best authorities in France that they required some locomotives to make good their losses, which they had been unable to replace by reason of their being at war and the railroad shops being out of commission. So we recommended to Washington that in some manner the locomotives should be gotten over to France.

That was acted upon to the extent that we have been authorized to loan to the French Government, out of our locomotives, locomotives which will be used to a certain extent by reason of the fact

that our supplies will be moved over other lines than these two. The French will operate those trains carrying our supplies up to a point of junction with one of our main roads, and we will have some of our locomotives loaned to them in that service.

Mr. McKENZIE. The entire number of engines and cars spoken of here this morning will not be entirely used on the lines of railroads under American operation, or joint operation?

Col. WILGUS. That is true; except when we get up to a million men we probably will have to call in the locomotives which we have loaned on these other lines in order to maintain our necessary supply over our own lines, and we have so notified the French. Those locomotives were loaned to the French with the understanding that we will have them back as we need them.

Mr. TILSON. There has been so much talk about our building railroads that I would like to have it perfectly clear about what the conditions of these routes of railroad is. Is some of it still to be double tracked, or is it just to be put in good condition, improved over the bad condition it has gotten into, due to the fact of its being used in time of war? What is the condition of those two roads?

Col. WILGUS. In our work we have to build a line to hook up one system with another system.

Mr. TILSON. That is all the new construction we are going to have?

Col. WILGUS. We will have to construct new terminals and new storage yards for the storing of the 90 days' reserve supplies for the American Army plus any advance you have to make.

Mr. FIELDS. These routes you showed us on the map are double-tracked already?

Col. WILGUS. They are double-tracked already; the French railroads are double-track roads.

Mr. CALDWELL. You mean the terminals at the ports?

Col. WILGUS. The terminals at the ports and intermediate terminals. The word "terminal" does not necessarily mean the end of the track.

Mr. ANTHONY. You said that the French lines are well constructed and are in good condition.

Col. WILGUS. They are in fair condition with respect to traffic. They have been allowed to run down during the war.

Mr. ANTHONY. What weight are the rails used on the lines we are going to use?

Col. WILGUS. They run from 60 pounds to 92 pounds, depending on the line.

Mr. HULL. What is the maximum grade over there?

Col. WILGUS. About 1 per cent. There are some slightly steeper grades, but that is the standard grade.

Mr. CALDWELL. What is the weight of the ordinary rail used on the New York Central lines?

Col. WILGUS. On the main lines it is from 100 to 120 pounds. We have ordered for French use and are getting delivered 80-pound rails.

Mr. CALDWELL. Do you think the 80-pound rail will do?

Col. WILGUS. Yes; for the reason that the axle loads on the French roads are much less than the axle loads on the roads in the United States.

Mr. CALDWELL. They use lighter trains, and they run slower?

Col. WILGUS. Precisely. Our locomotives over there only weigh about 35,000 pounds to the axle, as compared to 50,000 pounds to the axle on our trunk lines in the United States.

Mr. CALDWELL. Are the roads we are taking over rock ballast or dirt ballast?

Col. WILGUS. Portions of them are rock ballast, but it is gravel ballast for the remainder of the distance. There is no dirt ballast there.

(Thereupon the committee adjourned.)

COMMITTEE ON MILITARY AFFAIRS,
HOUSE OF REPRESENTATIVES,
Friday, February 1, 1918.

The committee met at 10.30 o'clock a. m., Hon. S. Hubert Dent, jr. (chairman), presiding.

STATEMENTS OF MAJ. GEN. WILLIAM M. BLACK, CHIEF OF ENGINEERS, AND MR. SAMUEL M. FELTON, DIRECTOR GENERAL OF MILITARY RAILWAYS, ACCOMPANIED BY BRIG. GEN. E. EVELETH WINSLOW, ASSISTANT TO THE CHIEF OF ENGINEERS; COL. WILLIAM J. WILGUS, COL. WILLIAM H. ROSE, COL. MAX C. TYLER, MAJ. EARL NORTH, MAJ. ROSCOE C. CRAWFORD, AND MAJ. RUFUS W. PUTNAM, CORPS OF ENGINEERS—Concluded.

The CHAIRMAN. General, the next item is, "Contingencies, Engineer Department, Philippine Islands: For contingent expenses incident to the operations of the engineer department in the Philippine Islands, to be expended at the discretion of the Secretary of War, \$4,000." That is the same appropriation that has been carried for several years.

Gen. BLACK. That estimate was made, based on the previous year's estimate. Since then we have received more specific information and we want to change that estimate. We will be entirely satisfied with \$2,500 instead of \$4,000.

The CHAIRMAN. Will you give us the details in regard to that estimate? You may insert that in the record.

Gen. BLACK. Because of the smaller number of troops stationed there they are not able to do so much work as heretofore and therefore we can safely reduce the estimate.

CONTINGENCIES ENGINEER DEPARTMENT, PHILIPPINE ISLANDS.

As indicated by the title of this appropriation it is for contingent expenses which can not be foreseen in advance. The estimate from the department engineer for the fiscal year 1919 is, however, made up on the following basis:

Pay rolls and services.....	\$500
Supplies.....	1,000
Unforeseen miscellaneous expenses.....	1,000
Total.....	2,500

The CHAIRMAN. The next item is:

Military surveys and maps: For the execution of topographic or other surveys, the securing of such extra topographic data as may be required, and the preparation and printing of maps required for military purposes, to be imme-

diately available and remain available until December 31, 1919: *Provided*, That the Secretary of War is authorized to secure the assistance, wherever practicable, of the United States Geological Survey, the Coast and Geodetic Survey, or other mapping agencies of the Government in this work, and to allot funds therefor to them from this appropriation, \$1,000,000.

At the last session of Congress you received an appropriation under this item of \$700,000, so that you are asking for an increase of \$300,000. Will you please explain that?

Gen. BLACK. That is made up of a number of different items. The process of making these military maps you are entirely familiar with. The first of these maps were made entirely in time of peace, by details from the Army, under the Department of Engineers.

Then two years ago, by the action of your committee, we got authority to make use of the Geological Survey more extensively than had been done.

At the outbreak of the war the Geological Survey was doing practically all the field work that was being done on the military maps, except some field surveys. The demand upon the Geological Survey for trained men to send to France was so great that their force has been depleted. Work which they could not undertake is being done by the commissioned and enlisted men, just as it had been before the war, by men under the department engineers.

These maps are printed at our establishment at the Washington Barracks. They are very confidential. The survey does not send out or distribute any of our military maps whatever. They can make their base maps from them, but the military information is all printed and distributed by ourselves.

The first item we have in this appropriation you will find is \$40,000 for the carrying on of the operations of this map-reproducing plant we have at Washington Barracks, which also does work for the War College. It reproduces the maps.

We have, thanks to the liberality of this committee, obtained a first-class lithographic press, and that is kept busy on all kinds of war maps, including the confidential maps, and on all kinds of confidential work for the War College itself. The first item of \$40,000 is for that.

The next item is for the equipment of the offices of the department engineers. Under the regulations as they used to be in force the drawing materials and the transportation were furnished by the Quartermaster's Department to the department engineers. That has been changed.

There was great difficulty in getting those things in proper quality, and so the Quartermaster's Department desired to have that changed, and desired that we arrange the purchase of those things. That is simply paying from one pocket instead of the other. That makes about \$30,000 of the appropriation.

The next item of that appropriation is \$20,000 for redrawing lithographic maps for the island of Oahu, in Hawaii. There is a large demand for that map all the time by the people on the island and others interested.

The next item is \$120,000 for preparation for fire control for land defenses. That requires detailed surveys in the vicinity of each of our fortified cities and the cities along the coast, and it requires detailed maps on a larger scale than military maps. The military

maps form the basis. Some of the detailed maps have to be extended to a scale of 12 inches to the mile. We are asking \$20,000 for that work. It is strictly for defensive purposes.

The next item asked for is for continuing progressive work on military maps of the region along the Atlantic seaboard and for 100 miles inland. That is particularly important in the South.

There are no maps, even road maps, in the South. Take, for instance, the industrial region in Georgia and Alabama. There are no maps that show how operations can be conducted between them and the coast. The States have not done anything and the United States has not done anything along that line in that region. We are asking for \$788,790 for that work.

This military map making is absolutely essential if we are ever going to be attacked by a foreign enemy. We have not sufficient maps of our own coasts.

To-day the chances are we are not going to be invaded for three months, anyway. When such an invasion will come, nobody knows. This \$788,000, of course, could be cut down, but the more it is cut down the longer the making of the maps will be delayed.

This is used not only for military purposes. Certain nonmilitary information is given to the Geological Survey, and those maps are sent all over the country. There is a very large civil demand for them, so that as much of the \$788,790 asked for as you think can be given ought to be given.

It takes a year or more after we get an appropriation before we get the maps out. I am not sufficient of a prophet to know that we are not going to be attacked within that time. We do not know what is going to happen.

Mr. McKENZIE. Will this \$788,790 complete the survey?

Gen. BLACK. No, sir. It takes \$3,000,000 to do that.

Mr. McKENZIE. Do you estimate that you can use that amount this year?

Gen. BLACK. Within the next fiscal year; yes, sir.

Mr. GORDON. Can you divert the necessary men to that particular work during the next fiscal year?

Gen. BLACK. Yes, sir. There are a good many men who can be obtained for this work who are not fitted to go to the front. Service at the front requires the full physical energy of a man, and if a man is deficient physically he simply becomes a pensioner of the United States. That class of men are cut out from going to the other side.

Mr. CRAGO. Could you not make use of your troops in training and use them for this purpose, and would it not give them good training?

Gen. BLACK. Not very well, because they have their hands full getting their other training.

Mr. CRAGO. Would not this work be good training for them?

Gen. BLACK. For a small number of the men it would. We, in the Engineer Corps, have been very fortunate, indeed, in having probably the best-equipped civil element in the country for military work in our civil engineers who have been conducting work in the field and have been accustomed to handling men, and handling them in gangs. Yet those very men find, when they get in the Army, that the organization and training required for an army and the discipline required for an army, where an enormous number of men are gathered to-

gether for a single purpose, is so very much more complex and detailed that there is a very large amount of information they have to get before they can handle their troops.

For example, when we get these railroad regiments, they are made up of railroad experts and workmen, because they have railroad work to do in France. But before they could get out of this country we had to put two Regular officers with each regiment for the purpose of showing them how to get their supplies for their men and how to take care of their men and how to keep their men in good shape when they get on the other side, and that training takes about six or seven months.

Col. WILGUS, what is your experience on that matter? How long does it take an officer of that kind to get on to the details that are necessary for him to know so that he can take care of his men?

Col. WILGUS. I should say it would take several months before he is able to do that without having to go through a mental process to do what should be done.

Gen. BLACK. You hear a great deal about red tape in the Army, and paper work. The paper work is enormous, especially since there is so much paper work required in connection with the supply of the troops, and paper work required to make the necessary deductions in the case of each man when he has to send home a portion of his pay and when he has subscribed for a certain amount of Liberty bonds, and when he has taken out life insurance.

Those papers are made as simple as possible, and I think you will find that it has been made as simple as can be. You have heard stories of suffering for lack of supplies. A very large part of that suffering on account of lack of supplies is due to the ignorance of the officers as to how to get the supplies. They do not know how to get them. In administering the affairs of an army of a million men gathered together at one point, each man of whom must be accounted for carefully, there is a tremendous amount of technical work required, and it is that technical training that no man in civil life has, and it is hard to get.

Mr. HULL. You spoke of the completion of this work costing \$3,000,000. Do you mean when the work is completed, you would have a complete map of the entire country?

Gen. BLACK. No, sir; we would have only a complete map of our coast line, for 100 miles back. Certain portions of the coast line they have already done. In order to get our coast line 100 miles back——

Mr. HULL. Does that include the Canadian frontier?

Gen. BLACK. We have not done much work along there, especially between the boundary of the State of Washington and the head of Lake Superior.

Mr. HULL. Does that include work along the Mexican boundary?

Gen. BLACK. Yes, sir; to the Pacific coast.

Mr. FIELDS. A point of order was made against this item for making maps last year, and it was contended by the member who made the point of order that the Geological Survey had this work, therefore this item was unnecessary in this bill.

Gen. BLACK. No, sir; they do not do this work.

Mr. FIELDS. I would like you to explain that in detail.

Gen. BLACK. The Geological Survey, under the law, is making a topographical survey of the United States, and doing other research work in geological matters. Military maps contain a great deal more information than that obtained by the Geological Survey.

There is a good deal of other matter put on military maps than is put on the ordinary topographic map. Take, for instance, the question of roads. There must be shown on the military map the character of the road, what kind of a road it is, and what condition it is in. That does not show on an ordinary topographic map to-day. Then, too, the character of every bridge must be shown, whether it is made of wood, steel, or whether it is an arch bridge; the length of the span and the height of the bridge above the water. Everything must be shown in order to show how much that bridge can carry, and how it can be destroyed.

Then, take the matter of railroads. The information must be given as to whether a railroad is a single-track or a double-track road, what switches there are, and where they are, what storehouses are on the road, and what facilities of all kinds which the road possesses for the use of an army.

Then, too, the topography of the country itself must be shown, where there are stone walls, and where there are fences; also where there are forests, and whether or not they can be gone through, whether the forest is thick or thin enough for military operations.

Then, when you come to the villages, you must know the capacity of each village for military work, whether there are any manufacturing establishments there, and what they can manufacture, what depots are there, what supplies can be brought in and stored there. All of that is military information.

Then there must also be shown on that map possible sites for camps, and there must also be shown where aviators can land. It requires certain definite characteristics. They can not land everywhere. All of this is called military information, and is in addition to the information obtained by the ordinary topographic survey.

Mr. FIELDS. In other words, the topographic survey is merely the groundwork?

Gen. BLACK. Yes; and this military information is then added to it. That is all confidential.

Mr. SHALLENBERGER. General, do not the topographic survey men put that information on the map?

Gen. BLACK. Not unless they are working for us.

Mr. SHALLENBERGER. Are they not working for you?

Gen. BLACK. To the extent of their power.

Mr. SHALLENBERGER. You commissioned most of their clerks, did you not?

Gen. BLACK. No, sir; we commissioned only those who are working on the military maps.

Mr. SHALLENBERGER. Who pays them?

Gen. BLACK. They are paid by the United States.

Mr. SHALLENBERGER. Are they paid as officers out of this fund?

Gen. BLACK. They are not paid out of this fund. They are paid out of the appropriation for the pay of officers of the Army.

Mr. SHALLENBERGER. Then the statement that these men were being paid out of another fund for the Geological Survey is not a

fact? These men were being paid out of the Geological Survey fund when you took them, and now their pay comes from another fund?

Gen. BLACK. Such as are on purely military work and have commissions in the service are paid out of the appropriation for the pay of the Army. But there are a good many men in the Geological Survey doing Geological Survey work, and they are not paid at all from the Army appropriation.

Mr. SHALLENBERGER. Those that are commissioned are paid out of the appropriation for the pay of the Army?

Gen. BLACK. Yes, sir.

The CHAIRMAN. Of course, that will reduce the appropriation for salaries of men in the Geological Survey to that extent?

Gen. BLACK. Yes, sir. General Winslow can tell you about the Geological Survey men abroad.

Gen. WINSLOW. We sent abroad first, at the request of the military authorities abroad, 13 officers, and that number was subsequently increased about one-half that number. They are there now, locating targets for the heavy guns that go over there. They are attached to the heavy gun organization there.

Mr. SHALLENBERGER. You commissioned more than that?

Gen. WINSLOW. We commissioned more than that, but those were the first men sent over there, and the best men, the men who were most skilled in that kind of work were sent over first.

Gen. BLACK. Then there were some others who came from the Coast and Geodetic Survey, but the detachment of officers with the heavy gun detachment over there were taken entirely from the Geological Survey.

Mr. SHALLENBERGER. You say that you are taking the men here who are not physically fit to go abroad and fight and putting them on this work, on this side. Would those men be commissioned?

Gen. BLACK. To a certain extent they are and to a certain extent they are not. The force that is engaged in the actual office work are civilians entirely, and frequently in making a detailed survey of a camp site, or something of that kind, we get civilians if we can. Those who are commissioned are the class of men who are needed permanently for that kind of work.

Mr. SHALLENBERGER. They are only commissioned for the emergency during the war?

Gen. BLACK. Yes, sir; they are; and in addition to that, those officers are commissioned in the Reserve Corps, and a man is put on the active list during the time he is actually at work, and when the war ceases he will be discharged and put on the inactive list.

Mr. SHALLENBERGER. Are they commissioned as engineers?

Gen. BLACK. They are commissioned as reserve engineer officers.

The CHAIRMAN. What rank?

Gen. BLACK. That depends on the nature of their duties. Most of them are lieutenants, a few of them are captains, and a very few of them are commissioned as majors.

Mr. KAHN. Is your idea in granting commissions to these men who have to get military information to enable them more easily to get the information?

Gen. BLACK. Yes.

Mr. KAHN. The people would be more apt to give information that is serviceable for military purposes to a man in the uniform of an officer than they would to a civilian?

Gen. BLACK. Very much more so. In addition to that, we have a hold on a man like that to prevent him from making improper use of the information he gets.

Mr. SHALLENBERGER. Does the man ask the people for the information? For instance, he would not go out and ask a farmer for military information, would he? He is supposed to know how to get it?

Gen. BLACK. He is supposed to be enough of a practical engineer to be able to do that.

Mr. SHALLENBERGER. As a matter of fact, if the Germans are going to invade this country and they have those topographical maps, even without this military information, that would be all they need, would it not?

Gen. BLACK. No; it would not.

Mr. SHALLENBERGER. They would have sufficient information, would they not?

Gen. BLACK. Of course, it would be better than nothing.

Mr. SHALLENBERGER. And you allow anybody who wants those topographical maps to have them, so it would not be a difficult matter for the Germans to get copies of those maps.

Gen. BLACK. There is no way of preventing those maps from getting into the hands of anybody who wants them.

Mr. GARRETT. When you have made your topographical survey, as described, without the military information, that survey would show all the bridges, their height, etc.?

Gen. BLACK. No, sir.

Mr. GARRETT. Those maps would not show that?

Gen. BLACK. No, sir. They simply show that there was a bridge at a certain point.

Mr. GARRETT. As to the villages and towns you referred to, and their resources, our country has been very progressive in that way, and each city and town has been very energetic in publishing to the world everything they possess in the way of warehouses and factories, and that information has been scattered throughout the world, as far as it could be, and so, as a matter of fact, the Germans probably have that information, have they not?

Gen. BLACK. There is a great deal of that information I would be delighted to have them have. There is a great deal of that information which has been published, but not in detail so far as the smaller places are concerned. They have not shown everything.

Mr. KAHN. Of course, so far as the roads are concerned, you could probably get that information from the automobile maps.

Gen. BLACK. Yes, sir; and we are using them as far as we can. We have a copy of every automobile map in the United States.

Gen. WINSLOW. We have obtained a great deal of valuable information connected with the roads of the country from the Office of Public Roads and Rural Engineering in the Department of Agriculture. Also, the Goodrich tire people have a number of pathfinders go over the country gathering information as to the character of the roads. Last summer one of their men asked us what information, in addition to what we had, we would like to get, and

they would direct their men to get it. They have done that, and we have received a great deal of valuable information from them. They are sending it in constantly and it is sent to the department engineers to be put on the maps.

Mr. SHALLENBERGER. Did you commission them also?

Gen. WINSLOW. No, sir.

Mr. SHALLENBERGER. Was not that military information they gathered for you?

Gen. WINSLOW. Yes. Those men go out and gather information in regard to roads for the benefit of automobile tourists. They publish cards that show the character of the roads and the grades. Then they have their men in addition to that get us other valuable information and add remarks in regard to the bridges. All of that is valuable information.

Mr. SHALLENBERGER. Is there any other reason for commissioning men doing clerk's work in the Army of the United States except that you want to make them subject to military control, to prevent them giving out the information to people who should not have it?

Gen. WINSLOW. That is the principal reason.

The CHAIRMAN. Is there any other special item under the item for military surveys and maps that you wish to call to the attention of the committee?

Gen. BLACK. I think that is all.

The CHAIRMAN. The next item is, "Lithograph press, Army Service Schools, Fort Leavenworth, Kans. For one-power lithograph press for the Army schools, Fort Leavenworth, \$6,000." That is a new item. That does not come under your jurisdiction, does it?

Gen. BLACK. Yes, sir. At Fort Leavenworth they also have a map-reproduction establishment which has been used in connection with the schools there. An effort has been made for three years to give them a power press at those schools, and we have put the item in again for \$6,000 for a power press there.

The CHAIRMAN. That is a new item, and it comes under the jurisdiction of your department?

Gen. BLACK. Yes, sir.

Mr. HULL. Do you do some work around Fort Leavenworth?

Gen. BLACK. Yes, sir; one of our depots is there.

Mr. HULL. You make maps in the interior?

Gen. BLACK. The maps that are made there are more particularly maps made for special studies and special military work, used in the training. They have produced there, for the purpose of giving problems out, maps of the Gettysburg Battle Fields, and a number of other maps of battle fields, and they are good topographical maps of the country. Those are given to the men for the purpose of working out problems in strategy and tactics.

The CHAIRMAN. You say they have been asking for this press for some time, and you think it is absolutely essential?

Gen. BLACK. I think it is.

The CHAIRMAN. I think that covers all of your items in the bill. I want to ask you to add to the hearings a statement as to what additional appropriation would be required under each of these items if the Army were raised to 2,000,000 men, and then what additional appropriation would be required if the Army were raised to 2,500,000

men, and also what additional appropriations would be required if the Army were raised to 3,000,000 men.

Gen. BLACK. I will be glad to do that.

Total estimated amounts necessary for the following items based on armies of 2,000,000, 2,500,000, and 3,000,000 men, respectively, are as follows:

	2,000,000	2,500,000	3,000,000
<i>Engineer equipment of troops.</i>			
Divisional troops.....	\$44,925,000	\$54,375,000	\$63,875,000
Corps troops.....	11,385,000	13,800,000	15,410,000
Army troops.....	21,075,000	32,325,000	32,325,000
Line of communications and service of the rear troops..	33,975,750	38,326,500	42,677,250
Service battalions (labor).....	7,906,250	8,937,500	9,968,750
Contingencies.....	30,733,000	32,236,000	35,791,000
	150,000,000	180,000,000	200,000,000
<i>Engineer operations in the field.</i>			
Military railroads:			
New equipment.....	207,990,000	272,570,000	337,160,000
Maintenance.....	24,400,000	30,100,000	35,800,000
Miscellaneous.....	91,810,000	112,200,000	132,560,000
Hospital buildings.....	163,635,000	231,000,000	279,125,000
Cantonments.....	302,500,000	387,500,000	480,000,000
Storehouses and depots in France.....	36,000,000	45,000,000	54,000,000
Civilian employees in France.....	750,000	1,000,000	1,250,000
Initial and automatic supply for special services.....	400,000,000	500,000,000	600,000,000
Motor transport.....	4,000,000	5,000,000	6,000,000
Wharves and floating equipment.....	20,000,000	25,000,000	30,000,000
Embarkation depots in United States.....	8,000,000	10,000,000	12,000,000
Instruction in engineer operations in the field, United States.....	1,000,000	1,250,000	1,500,000
	1,260,075,000	1,620,620,000	1,969,425,000

Gentlemen of the committee, if you would like to ask any further questions about our purchases, or what we have done, we have with us this morning Mr. Felton, who was in charge of all our railway and machinery purchases, as well as Col. Rose, who is our general purchasing agent, and Col. Wilgus can give you detailed information as to how everything relating to transportation is made up.

Mr. LUNN. I would like to ask whether there is any coordination in your department that has been perfected within recent months that will bring these purchasing agencies together.

Gen. BLACK. Yes, sir. For quite a long time back all purchases of the different departments were coordinated, in a measure, through the Priority Board. They are now making arrangements so that the various purchasing organizations we have in the Army shall purchase under one general head—I mean a one-man head—the things they are best fitted for purchasing. For example, there are certain things which, because of our practical experience our organization is best fitted for purchasing, and so far as those particular items are concerned, it is intended that we shall purchase them not only for our own but for the other departments. Then there are other things which the Quartermaster's Department are best fitted to purchase, and they will purchase them and supply us. That arrangement is now in process of formation. There has always been coordination, in a measure, and that is now being perfected.

Mr. KAHN. That will be under the control of Mr. Stettinius?

Gen. BLACK. Yes, sir.

Mr. SHALLENBERGER. We have had some figures in reference to the prices of the engines, and it has been said that we saved about \$3,000

on an engine. What sort of an engine was that? Our engines are not like the French engines, and I was wondering how you could make a comparison and ascertain how much you saved on those engines.

Gen. BLACK. Mr. Felton is more familiar with that subject than anybody else, and I will be glad to have him tell you about it.

Mr. FELTON. They were engines designed for service in France, with French clearances and for French structures. They have about two-thirds of the tractive power of our present freight engines here.

Mr. SHALLENBERGER. How were the comparative prices made? Did you compare the prices of the large engines, or of the small-sized engines? As I understand it, these engines cost about \$45,000, and because of the fact that we have perfected an arrangement for part payment, when certain parts of the engines are finished, we save a thousand dollars, and I also understood that we saved a total of \$3,000 on each of those engines. I have learned from what you say that they only have about two-thirds of the power or capacity of one of our big freight engines, and I wondered how you arrived at the saving.

Mr. FELTON. It is more than that. In the first place the price of the engines built by the American Locomotive Works for France was \$51,000. Now, the price of the engines built by the Baldwin Locomotive Works for the English in French service was about \$45,000. Those engines were of just the same tractive power, with a little difference in design, one of them being of French design and the other of American-English design.

The first engines we bought were on a hurry call, and I asked the American Locomotive Works to build half of these engines just like they built for the French, and the Baldwin Locomotive Works to build one-half, the same kind they built for the English, with superheaters added.

In making the contract there was a difference of about \$5,000, because we had to add to the price of the Baldwin engines the cost of the superheater.

After those engines were practically completed we had another requisition, and Baldwin people had been so remarkably prompt in their deliveries—in fact, they completed their first engine about 21 days after the order was given them—that we concluded, with Gen. Black's approval, to save that \$5,000 and take the Baldwin engines, and from that time on we ordered only Baldwin engines. One-half of the first engines were built by the American Locomotive Works and the rest of the engines were built by the Baldwin Locomotive Works, at a saving of practically \$5,000 on each engine.

We inserted in our contract a provision that we should get the benefit of any reduction that might be made by the price fixing of the Federal Trade Commission or any other Government agency, and it was fortunate that we put that in. We estimated that on the last engine we got that we will save us about \$4,000.

Mr. SHALLENBERGER. In comparison with what England and France have paid for exactly the same kind of engine?

Mr. FELTON. Yes, sir.

Mr. SHALLENBERGER. The fact that the American engine is so much larger, and therefore more expensive, would not affect the comparison made with the English or French engine, and it would not necessarily show the economy you effected as well as if you compared it with the same type of engine?

Mr. FELTON. I am comparing the engine with itself, as it were. I am dealing with two types of engines, both of them built for service in France.

Mr. SHALLENBERGER. The American engine is to cost more money than the French engine, because it has more effectiveness?

Mr. FELTON. The American engine, as you understand it, could not be used over there at all.

Mr. SHALLENBERGER. Those engines do not pull as much as the American engine?

Mr. FELTON. They have about two-thirds of the tractive power.

Gen. BLACK. What would be the relative price of the heavy American engine and the French engine?

Mr. FELTON. The price would vary with the tractive power. I should say that one of our Mikado engines at that time would cost about \$70,000.

Mr. SHALLENBERGER. That is about what our American railroads are paying for them?

Mr. FELTON. Yes.

Mr. ANTHONY. What would the same engine have cost, prior to the breaking out of the war in Europe; that is, the Mikado engines?

Mr. FELTON. The Mikado engine would have cost about \$28,000, and the other engine cost about \$18,000.

Mr. ANTHONY. What are the principal elements of increase included in that price, labor and material?

Mr. FELTON. Labor and material.

Mr. ANTHONY. Mostly labor?

Mr. FELTON. No; the material is an enormous item. The increase in the cost of materials going into a locomotive has been from 50 to 200 per cent.

Mr. OLNEY. The cost of labor is about 20 per cent on a locomotive, is it not?

Mr. FELTON. It is more than that. It will vary with these changes in designs. Originally, it ought to have been about one-third. Now I should say it is less.

Mr. ANTHONY. With your experience, how do you account for the fact that there is an increase of nearly 200 per cent in the cost of a locomotive, while in the case of an automobile, made of practically the same material, there has not been an increase of over 10 per cent?

Mr. FELTON. I do not know enough about the manufacture of automobiles to answer that question.

Mr. ANTHONY. It is a manufacturing proposition, is it not?

Mr. FELTON. The amount of material in a locomotive is so much greater than the amount of material in the automobile that I hardly think that is a fair comparison.

Gen. BLACK. May I ask a question? May not some of that difference have been excess profit on automobiles, which has been cut down?

Mr. ANTHONY. That may be.

Mr. HULL. What is the weight of one of these engines?

Mr. FELTON. You mean of ours?

Mr. HULL. Yes.

Mr. FELTON. About 160,000 pounds.

Mr. MCKENZIE. In connection with the question asked by Mr. Anthony as to a comparison of the cost of automobiles and loco-

tives, might not the fact of the great competition among manufacturers of automobiles be quite a factor in keeping down the cost, and the lack of competition in the manufacture of locomotives might also be a factor in keeping the price up? In other words, is it a fair comparison?

Mr. FELTON. I do not think it is a fair comparison at all. I know the first automobile I bought the agent got \$1,000 as his commission, which was 25 per cent of the selling price of the machine.

Mr. TILSON. Are these engines you refer to at the pier now, waiting to be shipped across?

Mr. FELTON. The French have some.

Mr. TILSON. Have we a number of them?

Mr. FELTON. Yes.

Mr. TILSON. We got the impression from some statement which has been made to the committee that these engines were doing duty on some American railroads to help in clearing the freight congestion.

Mr. FELTON. Only some of them have been converted. They are in service on our railroads temporarily.

Mr. TILSON. What change do you have to make in them?

Mr. FELTON. We have to change the couplers.

Mr. TILSON. The wheels are all right?

Mr. FELTON. The gauge is close enough to our gauge so that the engine can run on our tracks. We have to change the grates and the couplers.

Mr. TILSON. That is not very expensive, is it?

Mr. FELTON. It costs about \$600 for each engine.

Mr. TILSON. And does it cost them back again in shape for use on the French roads?

Mr. FELTON. No; that cost would be very slight. There would be no material involved in that. The change to our coupling involves the cost of a new coupler. When we take that out we can put the others on, and there is very little expense involved in that.

Mr. TILSON. For a cost of \$600 we can convert these engines intended for French use into engines that we can use here until they can be transported abroad?

Mr. FELTON. Yes.

Mr. LUNN. I would like to ask you a question regarding the engines. As I understand it, the ones you purchased from the American Locomotive Works cost \$51,000 at the start, and the ones you got from the Baldwin Locomotive Works cost \$45,000?

Mr. FELTON. Yes; about that.

Mr. LUNN. Were they the same engine?

Mr. FELTON. No. They had the same tractive power, but they were different in construction. The American engine was a less expensive engine to build.

Mr. LUNN. Probably the Baldwin people would have charged as much as the American people for the same type of engine?

Mr. FELTON. I do not know. I tried to get the American people to bid on the Baldwin design, but they would not do it.

Mr. LUNN. You found you could save \$5,000 by taking the Baldwin engine?

Mr. FELTON. We first found that a saving of \$4,000 could be made, and later on we saved \$1,000 by making payments on account; so that made a net saving of about \$5,000.

Mr. LUNN. Then, the American Locomotive Works would not build any of those engines at that price?

Mr. FELTON. No; they declined, and said they did not have time to make the new patterns and drawings necessary to build the type of engine that the Baldwin people built, and so we gave the contracts to the Baldwin Locomotive Works.

Mr. LUNN. You have purchased a good many engines?

Mr. FELTON. I have been buying them practically all my life.

Mr. LUNN. Have you bought most of your engines from the Baldwin Locomotive Works?

Mr. FELTON. Very largely. The Baldwin Locomotive Works have been in my territory, and so I have bought a great many engines from them.

Mr. LUNN. Do I understand correctly that the drawings had to be made by the Baldwin people, and that the American people were unable to do any of this work?

Mr. FELTON. I will tell you what they said. I said, "I wish you would bid on that engine, because I would like to have you build half of them." They said they could not; that it would take them too long to make the patterns and the drawings. Then the Locomotive Committee of the Council of National Defense gave the American Co. a large number of engines for Russia to fill their works; and what they did not get from us for France they got for Russia and for the French railroads direct.

Mr. LUNN. Can you give us the names of the members of the Locomotive Committee of the Council of National Defense?

Mr. FELTON. Mr. Vaucrain was chairman of that committee, and Mr. Fletcher, I think, was a member, and I think there was also a Lima man on the committee.

Mr. SHALLENBERGER. What position does Mr. Vaucrain hold in the Baldwin Locomotive Works?

Mr. FELTON. He is vice president of the Baldwin Locomotive Works. Mr. Fletcher is president of the American Locomotive Co.

Mr. LUNN. Where did you get any competition in the bidding for the locomotives? Why could not the American have had them without any competition?

Mr. FELTON. Because I did not think it was worth \$5,000 more.

Mr. LUNN. That is exactly what I was trying to bring out. The American would insist on having \$5,000 more for the same engine, as against the price charged by the Baldwin people?

Mr. FELTON. No; I did not say that. It is a different design.

Mr. LUNN. Who designed it? Did the Baldwins design it?

Mr. FELTON. No. The engine which the American built was built to French specifications for the French State railroads.

Mr. LUNN. If they did not design it, why could not the American people have those designs, the same as the Baldwin people?

Mr. FELTON. The design of a locomotive requires an immense amount of work in the drawing room, and a large amount of pattern work. The American people had built a large number of engines for France, and they were running them out of their works fairly well.

Mr. LUNN. The Baldwin people were not building these French engines for the French Government?

Mr. FELTON. The Baldwin people were doing the same thing, only they were building locomotives for the English Government for use in France, engines that had French clearances.

Here were two engines, one being built for France and the other for England, and they had the patterns and the designs, and they were going through the shops, and in order to get the engines quickly, I said each of them should build the engine they could build the quickest, but when we came to the large order I said I was not going to pay \$5,000 more than was necessary.

Gen. BLACK. The French specifications on locomotives and on railroad cars, and on some other items, have increased the cost in every figure. The French are very particular in their specifications, and the way they are written makes an increased cost. They are especially particular in regard to the painting of the engines, and when it came to making our engines, we saved \$65,000 on the painting of the engines.

Mr. FELTON. We saved \$65,000 on the total number of locomotives purchased on the one item of painting alone.

Mr. LUNN. You think that the tremendous increase in the cost of the locomotives at the present time over the cost in the prewar period is in large part due to the increase in the cost of the materials?

Mr. FELTON. I did not say that. I said the material which goes into the locomotive has increased enormously in cost.

Mr. LUNN. Have you any idea what that amounted to in the cost of the locomotives?

Mr. FELTON. I could figure that.

Mr. LUNN. I would like to have the figures in reference to the material, and also in reference to labor.

Mr. FELTON. I can give you the figures showing how it stands between labor and material.

Mr. HULL. The price of material is fixed by the Government?

Mr. FELTON. On a part of it.

Mr. HULL. What was the price before the war on steel rails?

Mr. FELTON. Steel rails before the war were \$30 a ton for the open-hearth rail. For our open-hearth rail for France we paid \$40, and the French and the Russians paid from \$55 to \$59, according to our figures. To-day we are buying Russian rails at \$50 a ton. There is an increase from \$30 to \$50.

Gen. BLACK. The open-market price to-day is what?

Mr. FELTON. There is not any.

Gen. BLACK. You know of a transaction recently, do you not?

Mr. FELTON. I know of a transaction recently where the price was \$74 a ton.

Mr. SHALLENBERGER. What do you know about the story about the price of steel being quoted at \$90 a ton, and then being put back to \$55 a ton?

Mr. FELTON. I have not heard of that.

Gen. BLACK. That was during the early conferences between the War Board and the steel men. That was for steel plates, I believe.

Mr. SHALLENBERGER. They put down the price of plates; why do they not put down the price of rails?

Mr. FELTON. You might say the price of rails did not go up. It did not begin to go up as much as the price of plates.

Mr. GORDON. To what extent did you investigate the cost of the labor and material that went into the locomotives in fixing the price?

Mr. FELTON. I did not fix the price.

Mr. GORDON. Who did?

Mr. FELTON. I asked for bids for the engine. It went through that form, and the locomotive committee got the price, and the bids were \$45,000 and \$51,000.

Mr. LUNN. The locomotive committee was composed of the representatives of the companies?

Mr. FELTON. Yes. They were officials of the companies. Then I tried to get them down, and I succeeded in reducing the price.

Mr. NICHOLLS. The only two bidders for those locomotives were members of the locomotive committee?

Mr. FELTON. Yes; they were the only two people who could make the engines.

Mr. GORDON. Then, as a matter of fact, the manufacturers fixed their own prices?

Mr. FELTON. The price was fixed, I think, in competition for the foreign work. I think originally their basis of price came from the price they charged the English and the French.

Mr. GORDON. Before we went into the field they charged enormous prices to all the foreign Governments for everything furnished; that was well known, was it not?

Mr. FELTON. I do not think they did in the early part of the war, because I think they were so hard up for orders that they would have made almost any price to get the foreign orders.

Mr. GORDON. They were receiving enormous prices for iron and steel?

Mr. FELTON. That was further along in the war.

Mr. GORDON. Before we entered the war?

Mr. FELTON. Before we entered the war; yes. During the first year of the war everybody was taking orders at any price they could get, and the prices were very low.

Mr. GORDON. To what extent were the elements of cost, especially the cost of material and labor, investigated by anyone outside of the manufacturers themselves?

Mr. FELTON. I investigated them as best I could, and did the best I could with the conditions that confronted me.

Mr. GORDON. You had just the manufacturers to deal with?

Mr. FELTON. Yes.

Mr. GORDON. And only one of them consented to bid, and so you were practically up against it?

Mr. FELTON. They both bid, but they both bid on their own type of engines, and it was up to me to decide whether the \$45,000 engine was the best, or the \$50,000 engine.

Mr. GORDON. Are those the only two manufacturers of locomotives in this country?

Mr. FELTON. They are the only two that bid. The Lima Locomotive Works build locomotives, and some smaller manufacturers build smaller locomotives.

Mr. GORDON. You called on the locomotive committee of the Council of National Defense, which was composed of representatives of these firms?

Mr. FELTON. We had them recommend builders.

Mr. SHALLENBERGER. What salary did they get?

Mr. FELTON. I think they get a dollar a year.

Mr. GORDON. Did they furnish any detailed statement showing the increase in the cost of labor and material that would justify this enormous increase in price?

Mr. FELTON. There was not any increase in price. That was the ruling price at the time. We compared the prices on a pound basis with the prices of other locomotives to see whether these prices were fair, and we found they were.

Mr. GORDON. That was based upon the prices they had been getting?

Mr. FELTON. There was a market. When we went into the war there was a certain market price for locomotives that they charged American railroads, and by getting a pound price I made my comparisons to see what the comparison was with the prices on these smaller engines. That was the only check we had.

Mr. KAHN. Did the same condition prevail with regard to the locomotives as with other commodities—that is, when the foreign nations began to bid against each other they forced the prices up?

Mr. FELTON. I think they were bidding against themselves in this country on everything.

Mr. KAHN. The English were trying to get locomotives as fast as they could?

Mr. FELTON. I do not think that applies to the equipment situation as much as to the other situation, such as that in reference to billets and plates.

Mr. KAHN. That is, material?

Mr. FELTON. I mean to say there was not such a demand from England and France on this country for other things as there was for billets and for plates and for shell steel.

Mr. KAHN. You found that their bidding against each other caused a great rise in prices in this country for war material?

Mr. FELTON. There was a time when they bid against each other, but they soon centered their efforts in one man, and that was Mr. Stettinius.

Mr. KAHN. I think the war was on for about two years before they did that.

Mr. FELTON. Not so long as that. It was pretty early in the war when they made that arrangement, and after that the prices were held down.

Mr. GREENE. Did this competition for structural steel plate tend to enhance the price of the other metals that went into the locomotives?

Mr. FELTON. Yes.

Mr. GREENE. That is an indirect effect of competition?

Mr. FELTON. Yes.

Mr. SHALLENBERGER. You spoke a moment ago about estimating the cost of the engine by the pound. When we were considering the price of machine guns, and the cost of the actual material going into the

guns was before this committee, and the Secretary of War was here, I quoted the price of 5 cents a pound, and he said they bought them for 3 cents and a fraction. Figuring out the cost at 5 cents a pound for the material on the engines makes a cost of \$8,000 for the raw material, and that means about \$37,000 for the labor and the cost of manufacture.

Mr. FELTON. I do not think your basis is correct. Our engines are fabricated.

Mr. SHALLENBERGER. The material in the engine is not any better than the material in the machine guns, is it?

Mr. FELTON. Not the material, but the work is more. I will figure that up and give it to you, you would like to have it.

Mr. SHALLENBERGER. I would like to have you put that in the record.

Mr. FELTON. I have ascertained that the percentages of labor, material, and overhead charges of the cost of manufacture of a locomotive in 1914 and 1917, respectively, are as follows:

Material, 1914, 64.2 per cent; 1917, 70.8 per cent.

Labor, 1914, 18.4 per cent; 1917, 14.3 per cent.

(Overhead charges, 1914, 17.4 per cent; 1917, 14.9 per cent.

Mr. HULL. You spoke of the engines costing \$18,000 before the war.

Mr. FELTON. Yes.

Mr. HULL. Did you mean before our declaration of war, or before the European war broke out?

Mr. FELTON. Before the European war, about the time the European war broke out.

Mr. HULL. That is about the lowest you ever bought these engines for, is it?

Mr. FELTON. No. I have bought an engine similar to this engine as low as \$15,000.

Mr. HULL. Has the price of switching engines advanced proportionately?

Mr. FELTON. I think not.

Mr. ANTHONY. Was it possible before the war for the railroads of this country to obtain competitive bids from the locomotive manufacturers?

Mr. FELTON. Yes.

Mr. ANTHONY. Is it not a fact that many of the big railroad systems had been compelled to manufacture their own locomotives because they found they could manufacture them cheaper than they could buy them?

Mr. FELTON. No, sir; very little of that sort of thing has been done. The Pennsylvania Railroad has a very large shop at Altoona, Pa., and they have always kept some engines building in that shop, so that when there was any idle time they would work on those engines.

Mr. ANTHONY. It has been my impression that a good many of the systems had been doing their own manufacturing of locomotives. Has the Santa Fe System been doing that?

Mr. FELTON. The Pennsylvania and the St. Paul are the only two roads I can think of now that did any extensive work in building their own engines.

Mr. ANTHONY. The New York Central did that for a while, did they not?

Mr. FELTON. The New York Central has always patronized the American Locomotive Works, located at Schenectady, which is on their own line, just as the Pennsylvania Railroad has concentrated their manufacture at the Baldwin Locomotive Works.

Mr. ANTHONY. I know the Santa Fe System has made a good many engines.

Mr. FELTON. They did in times gone by, but not in recent years.

Mr. GARRETT. You went into the market to buy engines and you only found two concerns that could make the engines that you wanted?

Mr. FELTON. And make them quickly.

Mr. GARRETT. In the time you wanted them, and you gave one order to one company for half of the engines and you gave an order to the other company for half of the engines, and one company charged \$5,000 more for the engines than the other. There was no competition; you had no way of forcing competition, and so the only thing left for you to do was to give the one making the engine that would answer the same purpose the contract for making the remainder of the engines, and thereby you saved \$5,000 on each engine. If they are making an exorbitant profit, there is one of two things the Government can do—either commandeer the engines or get their excess profits back in taxes, which I think they will proceed to do.

Mr. FELTON. Yes; I think so.

Mr. QUIN. What did the engine that you are paying \$45,000 for now cost in 1914?

Mr. FELTON. About \$18,000.

(Thereupon the committee adjourned to meet Monday, February 4, 1918, at 10.30 o'clock a. m.)

ARMY APPROPRIATION BILL, 1919.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON MILITARY AFFAIRS,
Thursday, January 31, 1918.

The committee this day met, Hon. S. Hubert Dent, jr., (chairman) presiding.

STATEMENT OF BRIG. GEN. J. McI. CARTER, CHIEF MILITIA BUREAU.

The CHAIRMAN. General, the first item for the National Guard is, on page 66, "Arming, equipping, and training the National Guard," and the total amount you are asking for under that head is \$316,500. That is a very small item this year as compared to the amount appropriated for the same item last year. Will you please explain that estimate?

Gen. CARTER. I want to say in respect to the estimates for the next fiscal year for the National Guard that we were ordered to make our estimates for the existing establishment, and at the time we submitted this estimate all of the National Guard except that of the Territory of Hawaii had been brought into the Federal service, except a few of the State staff corps and department officers. We therefore based those according to instructions, to care for the Hawaiian National Guard and the standing expenses, such as property and disbursing officers, and the care of property, and things like that.

It would have been impossible at that time to tell just what we would need in the way of an appropriation for any other than the Hawaiian National Guard, because it was dependent upon the action of the governors of the States, and we did not know whether they would want to organize under the act of June 3, 1916, additional National Guard units.

Since that time some States have organized units. I have a statement as to those that have been organized, and as to others that have expressed their intention of so doing.

We are in a situation now of being unable to supply those units with arms, equipment, and uniforms, because they are not to be had. We have funds appropriated for this present fiscal year. As soon as we can get those things from the supply department, or in the open market, we propose to equip these new regiments.

The CHAIRMAN. What States have organized?

Gen. CARTER. In addition to the National Guard in Hawaii, which exists as it did prior to the draft, there is a regiment of Field Artillery in Indiana, a regiment of Field Artillery in Minnesota, one in New Jersey, and two Coast Artillery companies in New Jersey.

There are two companies of Coast Artillery in Virginia which have been recognized, and three have been inspected for recognition, and as soon as minor corrections can be made in the organization they will be taken in. There is the Fifth Infantry in California, a company of Coast Artillery in Florida, a Field Hospital company in Iowa, and four companies of Infantry in Iowa; three companies of Infantry in Maine; two regiments of Infantry in Tennessee, and the following are authorized:

Two regiments and a battalion of Engineers in Michigan; three separate battalions of Infantry in California; a battalion of Infantry in Idaho; a regiment of Cavalry and Infantry in Iowa; a regiment of Infantry in Maine; one regiment of Infantry in South Dakota, and Texas is authorized to raise three regiments of Infantry, and recently authority was granted Texas to raise six regiments of Cavalry.

Mr. GREENE. There is apparently some military organization now under way in Vermont. Does that take the form of what is popularly called the Home Guard, or is that to be recognized?

Gen. CARTER. That is probably the Home Guard, but they have not notified the Militia Bureau that they intended to organize, although if they should present an organization later for inspection, and it complied with the law, we would accept it. The law provides that each State may have a minimum of 800 hundred men per Senator and Congressman, and that the organization of the unit as to branch or arm of the service that shall be formed from that number of men shall be prescribed by the President, so that we can regulate the organizations as to the arms of the service in the States, but we can not limit them as to the number of men they may put in the National Guard, nor can we compel them to raise regiments if we consider it necessary. There has been, I think, some delay and some uncertainty as to the status of the National Guard, because there has apparently been a general opinion held that our military system might be changed as a result of the war, and some of the governors of some of the States have hesitated to go ahead with the organization of the National Guard on that account. But others have endeavored to replace the regiments drafted into the Federal service as fast as they could; and others still have depended for their military force in the State entirely on the Home Guards, or State constabulary. Those troops are called by different names in the different States. New York has about 12,000 at the present time, and Connecticut and Massachusetts have quite a large number. Pennsylvania and Wisconsin are well provided with State forces, entirely under the control of the governors of those States.

The only provision the General Government makes is that it has authorized the Ordnance Department to issue arms and equipment, and by issuing obsolete arms, a good many arms have been furnished, although some of the States, like New York, have purchased their own arms.

Mr. CALDWELL. Is there not any National Guard in New York now?

Gen. CARTER. None recognized. There are some State staff corps officers.

Mr. CALDWELL. Under our constitution it is provided that the governor must maintain a militia to the extent of 10,000 troops, and I saw in the paper that the governor commissioned certain men and authorized them to raise their regiments.

Gen. CARTER. There is, as I said, a force of some 12,000 men in New York in the State guards. They have never been presented for recognition as National Guard troops.

Mr. CALDWELL. Those are State police. They wear different uniforms, and they do not come under the Militia Bureau at all. What I was talking about was this, when you drafted the National Guard and took them away from New York, moved them away from their armories, there was left a certain amount of material and equipment for the men who would come in and start a new National Guard, and I was under the impression that something was done.

Gen. CARTER. When the National Guard was called in, owing to the urgent need of equipment for Federal uses, the Government endeavored to buy from the States the military equipment and materials they had in excess of their needs.

Mr. SHALLENGERBER. You spoke about the National Guard in certain States that has been recognized. What does that mean?

Gen. CARTER. It means that we have inspected the units and found that they comply with the law.

Mr. SHALLENGERBER. Are they authorized and organized?

Gen. CARTER. They are organized, and they are entitled to armory-drill pay and uniforms, arms, and equipment.

Mr. SHALLENGERBER. You are liable to call them into the service any time you want them?

Gen. CARTER. Not liable to.

Mr. SHALLENGERBER. You are authorized to do it?

Gen. CARTER. We are authorized by law.

Mr. CALDWELL. Have you been stimulating this, or have these new organizations sprung up of their own accord?

Gen. CARTER. We have not endeavored to stimulate it, because we could not equip them now, and we have told the adjutants general of the States that we would recognize any units they presented, with the understanding that they must wait for equipment, arms, and uniforms until we have provided for the Federal forces, and that while subject to the draft or call into the Federal service, it was not intended at the present time to draft them. We have taken the ground that the act of June 3, 1916, provided the means whereby the governors may raise forces that could be put in training, and when trained would be available for Federal use, and these men undergo that training while in State service, and are available later for Federal call, if needed. To organize a regiment of green men and induct it into the service would only add to our difficulty in the way of getting supplies.

The CHAIRMAN. What is the condition of the equipment of those organizations in the different States?

Gen. CARTER. Two Coast Artillery companies in New Jersey that were first recognized have been equipped. Some of them have made requisitions for supplies, and we have asked the supply department of the Army to notify us at the earliest practicable time when we can hope to get this material, and we have informed some of the

States—we say they can buy uniforms in the open market if they can be had at a reasonable price, and we will procure them in that way.

Mr. SHALLENBERGER. You had a regiment offered from Nebraska. What is the status of that regiment? They thought they were going to be called, and then it was abandoned. What was the reason for that?

Gen. CARTER. The regiment was authorized, and they went ahead with it, and my recollection is—I have not the record here—that we inspected them, and then they withdrew their request, and I understand the regiment is to be disbanded.

Statement as to circumstances connected with the disbandment of the Nebraska regiment herewith:

STATEMENT AS TO WITHDRAWAL OF REQUEST FOR RECOGNITION OF REGIMENT OF INFANTRY, NEBRASKA NATIONAL GUARD.

WAR DEPARTMENT,
MILITIA BUREAU.
Washington, February 6, 1918.

Inspection, with a view to Federal recognition, was requested by the adjutant general of Nebraska under date of October 20, 1917.

The officer in charge of militia affairs, Central Department, was on October 24, 1917, directed to confer with the adjutant general of Nebraska and arrange details of inspection.

The report of the inspecting officer was received in the Militia Bureau December 11, 1917. This report disclosed defects and irregularities in the organization which it was necessary to correct or remove before recognition could be extended.

While these defects were in process of correction the governor of Nebraska informed the Secretary of War as follows:

"The Seventh Infantry, Nebraska National Guard, has been disbanded to enable men to enter service as individuals. In view of the fact that the amendment to the selective-service regulations changing status of men of draft age in National Guard units was announced by the Provost Marshal General too late to enable men of Seventh Infantry to secure discharges and enlist before December 15, I request that authority be granted for them to enlist now for assignment to the Thirty-fourth Division."

The following telegram was sent to Gov. Neville on January 11, 1918:

"Reference your telegram to Secretary of War of January 8 concerning disbanding Seventh Nebraska, all men who have taken oath under act of June 3, 1916, pass to the National Guard Reserve. You are authorized to discharge men from reserve to enlist in Federal service to take effect upon completion of their induction into Federal service. Such members of this regiment as may be of draft age will not be permitted to enlist unless special provision is made to have them inducted into service through the local-boards prior to the regular call for drafted men.

"J. McI. CARTER,
"Chief Militia Bureau."

The following telegram, dated January 14, 1918, was received same date:

"LINCOLN, NEBR., *January 14, 1918.*

"CHIEF OF MILITIA BUREAU,

"Washington, D. C.:

"No members of the Seventh Nebraska Infantry have subscribed to the oath provided for in section 70 of the act of June 3, 1916. All men were enlisted for the war period only. All members of the Seventh Infantry have been honorably discharged and are now free to enlist as individuals.

"CLAPP, *Adjutant General.*"

On January 15, 1918, the following telegram was sent to the adjutant general of Nebraska:

"Re telegram 14th instant. Section 7, chapter 205, of Nebraska, 1917, requires enlistment for period prescribed in regulations governing National Guard. Required oath given in section 70, act of June 3, 1916. Mandatory in section 71, same act. Any other form of oath illegal. Policy of War Department to grant discharge to members National Guard at termination of war upon individual application only.

"CARTER, *Chief Militia Bureau.*"

Since it appears from the statement of the adjutant general of Nebraska that no members of the Seventh Nebraska Regiment were properly inducted into the service as members of the National Guard, no further action has been taken.

J. MCL. CARTER,
Brigadier General, National Army,
Chief Militia Bureau.

Mr. SHALLENBERGER. Did they withdraw the request? Will you put in the record a statement showing whether they withdrew the request, or whether the War Department informed them that they would not be called? It seems to be the opinion out there that they did not want them to exist as National Guard, and they hoped after they had formed their organization that the time would come when they would be called into the service, but upon learning that they would not be called the project was abandoned.

Gen. CARTER. Early in August, when we had drafted all the National Guard we had, it became necessary to decide what we were going to do for additional National Guard, and we obtained an opinion from the Judge Advocate General that the governors of the States were authorized to go ahead and organize up to the limit fixed by the law, and we told them that the organizations they would form from the men thus enlisted would be the same as those specified under former arrangements early last May. We also told them that while those organizations would be subject to the draft, they would not be drafted until the needs of the Federal Government demanded it, but that the individual members would be subject to the selective draft.

In a great many States they seem to have lost sight of that last statement. Many men were induced to enlist with the understanding that they could thereby enter the service voluntarily and would escape being drafted.

Mr. SHALLENBERGER. Provided you recognize them before the draft, then the fact that they had enlisted in the National Guard would have released them from the draft.

Gen. CARTER. That was contrary to the information sent them, but in many cases we urged upon the adjutant general of the State that he inform the individual members of that fact before they enlisted.

Mr. LUNN. If you had drafted a regiment prior to the call of any of the individuals, then they would not have been subject to the selective draft?

Gen. CARTER. Yes.

Mr. OLNEY. You have abandoned the scheme of raising 25,000 of the so-called United States Guards?

Gen. CARTER. Yes.

Mr. OLNEY. Many States have Home Guards and some have not?

Gen. CARTER. Yes.

Mr. OLNEY. What is going to happen in the case of the Home Guards?

Gen. CARTER. We will use Federal troops in the States where protection can not be afforded otherwise.

Mr. OLNEY. Where protection is needed in case of strikes or riots?

Gen. CARTER. I think I can state the policy. It is the duty of the State to protect life and property. It has that police power reserved to it. If, however, through some failure of the legislature to act or through some lack of sufficient agencies for enforcement of law and order, there appears to be danger that we will be injured in our prosecution of the war or that property will be destroyed and lives lost we will put Federal troops on duty.

Mr. GORDON. If they are called for by the governor?

Gen. CARTER. Wherever we can get them.

Mr. TILSON. Suppose you thought that some of the bridges on the New Haven Railroad, that were important in the matter of transportation, would be destroyed, and you wished to have those bridges guarded. Would you consider it your duty to send Federal troops there or would you have any right, or could you arrange with the States to send members of the Home Guards there, the State of Connecticut having a good Home Guard?

Gen. CARTER. We have asked the States to do that; that is, we have asked all the Eastern and Seaboard States to do that. Where they have not a Home Guard, we have had to provide Federal troops.

Mr. TILSON. What is your policy toward the troops called into this kind of service? Do they receive the same pay as the men in the United States service, or what is the arrangement?

Gen. CARTER. They are entirely under State control, and we have no appropriation under which we could pay them. There is no law under which they could be in the Federal service; the law only covers National Guard service.

Mr. TILSON. Then, you penalize the States that do provide for the taking care of their own forces; you call out their men, whereas, in other States, where they do not have such a guard, you send Federal troops to do that work?

Gen. CARTER. We do not call them at all. We ask the governors to preserve law and order in their States. We expect them to do it.

Mr. TILSON. Do you not think there ought to be some sort of recognition that would recognize these Home Guard troops that are under the control of the States so that they could be used by the Federal Government and paid when they rendered that service?

Gen. CARTER. No; I think that would add another force to the Army. We already have three different branches of our Army now, and if we used poorly trained men, it takes a great many more to do the same work. It is much more expensive than if we use the troops who are now in the Federal service. Until we get to the point where it is necessary to send these trained men to Europe it will be more economical to use the soldiers we have in training for that purpose.

Mr. TILSON. Then unless the State wishes to do it, and pay for it, you would call in the Federal forces from the outside to guard the property within the State, although that State had armed forces to do that work?

Gen. CARTER. As I said before, rather than see some utility that is vital in the prosecution of the war destroyed or property destroyed, we will send troops, but we do not desire to do it, although we would have to do it in some cases.

Mr. LUNN. If you are going to send troops, you would call on some particular company or battalion; you would not form another unit?

Gen. CARTER. No. The United States is divided into six departments and each department has a commanding general, with headquarters at a central point in the department. The department commander is charged with the administration of all military forces in his department, and we expect him to keep posted as to the needs of everything in his department. When we are called upon by any locality or organization of any kind for Federal aid, we ask the department commander to send an inspector or go there himself at once in order to determine what the necessities of the case are and to make recommendations to us, and we then expect him to get such aid as he needs from such of his own troops as are available to take care of the situation. If he reports that he has no troops for that purpose, we have to take them from some of the cantonments.

Mr. LUNN. It would be a temporary assignment?

Gen. CARTER. Yes.

Mr. LUNN. It would not be a permanent proposition?

Gen. CARTER. No; it would be a temporary assignment, and if an organization were scheduled to go abroad, we would not take a unit from them.

Mr. LUNN. What troops did you send to Lewiston, Me., where there was a strike and where they had no Home Guard, and yet there was not any Government work going on? Have you any authority to quell a strike?

Gen. CARTER. No; not unless the governor or the legislature of the State informs us that he or they are unable to keep the peace.

Mr. LUNN. Then they can call on the Federal Government?

Gen. CARTER. Yes.

Mr. LUNN. Did not the proposition to raise a force of 25,000 United States guards fail because you could not get volunteers?

Gen. CARTER. No. It was owing to a change of conditions that occurred after we started organizing the guards. The Secretary of War decided that the troops who would be the last to go abroad might be used for that class of duty and so save the expense that would be otherwise incurred.

I was not informed as to the exact reasons, but I judge that it was found that we were not sending troops abroad as fast as we had expected and that some of them would be here for quite a considerable while, and those who would be the last to go might be used, and thus save the cost of an additional force.

Mr. TILSON. Do you not think it would be economical from a military point of view if the States were encouraged to raise these forces out of the men not subject to the draft or, perhaps, under the age for military service, and thus encourage the raising of these troops and train them, so as eventually not to use any of our men who would be sent for military duty abroad?

Gen. CARTER. State Guards?

Mr. TILSON. Do you not think the State Guards ought to be encouraged by the Federal Government?

The CHAIRMAN. You mean the guards provided for in the national defense act?

Mr. TILSON. I am speaking of the Home Guards.

Mr. LUNN. You are not referring to the United States Guards?

Mr. TILSON. No.

Gen. CARTER. We have encouraged that. It is not the function of the Federal Government, anyway. We have told them we thought it was a good idea.

Mr. TILSON. Do you not think it would be a good idea to have the Federal Government connected up with that, so that if the governor should need that force it could be used, composed of men, for instance, over 45 years of age? They would form a perfectly good force for work of that kind, whereas they would not be fitted to go abroad.

Gen. CARTER. I think it is an admirable idea to have them for that kind of work. But as far as taking them into the Federal service——

Mr. TILSON (interposing). I do not mean that at all, but they could be used for the work that the National Guard was used for in other times?

The CHAIRMAN. In regard to these organizations you mentioned in the different States, what is the age of the men they are taking into those organizations?

Gen. CARTER. From 18 to 45, but a great many of them are trying to get men beyond 31 years of age so that they will not be taken out by the selective draft after the men are partially trained.

Mr. SHALLENBERGER. Is this policy which was applied in the Nebraska case the same that is applied all over the country?

Gen. CARTER. Yes.

Mr. SHALLENBERGER. The governor of Nebraska came here and saw the officials in the War Department. He must have gotten assurances that it was all right to go through with it, because he went home and resigned the governorship to take charge of it. But later on information was given that the regiment was liable to be called into the service. If a regiment should be organized in any of these States and it was thoroughly organized, it would not be the intention of the War Department to call that regiment into service now? You do not expect to take that way of raising an army, to allow a regiment to be organized now and then inducted into the service as an entire regiment? Your policy is rather to take men in the cantonments and train them there, rather than to have them raised as National Guard units and then taken in in a body?

Gen. CARTER. The policy is this, that inasmuch as the act of May 18, 1917, provided means for raising an Army, we had to proceed along the lines indicated there up to the point of another draft: and, as we had taken in all of the National Guard that existed at the time of the President's proclamation, that we would not for the present, at least, draft any more National Guard regiments; that is, for the present. The policy as to the future must depend upon circumstances.

Mr. SHALLENBERGER. The present policy is as you have indicated?

Gen. CARTER. If we could get a regiment fairly well trained and bring it into the service, it would be a distinct loss to leave it out, but to add a new force would simply add to the present difficulty.

The CHAIRMAN. The point is this, as I understand it, you take these organizations in under the national-defense act, and they have to take the oath, and that will make them subject to the draft?

Gen. CARTER. Yes.

The CHAIRMAN. So that the President could call these organizations in at any time he wanted to after they were once taken in under the national-defense act?

Mr. SHALLENBERGER. These companies were already organized, and they were already training. The officers had provided the uniforms, supposing that they were going to be called as a regiment. It is apparent that there was a change in policy.

It has been charged in Nebraska that political influence had something to do with the calling off of that particular regiment, and I wanted to know whether that was a special policy, which was adopted for Nebraska, or whether it was the general policy you have adopted for the entire country.

Gen. CARTER. No, sir; I can tell you the entire history of that. We did not have any requests for the formation of the National Guard troops from the governors of the States for some time after the draft of August 5. We had announced this policy I spoke of. In New Jersey they organized a regiment of Heavy Artillery. As soon as it was organized they wanted it drafted. They had been told, prior to the time when it was inspected for Federal recognition, and prior to this Federal recognition, that its draft must depend upon the needs of the Federal Government, but that was not definite enough. For some time the matter was discussed as to whether it would be expedient to take entirely new regiments, when we had no clothing for them, and no equipment or arms for them. The matter was brought to a head finally by a letter from the lieutenant governor of Nebraska, who said he would be called to take over the governor's duties if the governor went away, and he thought it was only just that they should find out just what the situation was, so that they could make their arrangements. Then the matter was discussed very thoroughly, and I was informed of the policy I have just told you about—that for the present no National Guard regiments would be drafted.

Mr. SHALLENBERGER. Do you know anything about an original agreement or understanding whereby the regiment was considered to be called? There was no change of policy, apparently.

Gen. CARTER. Never. There must have been some misunderstanding in Nebraska.

Mr. CALDWELL. Under the national defense act of 1916 we made a special exception of the ancient organizations that had existed in the United States for a long time. One was the Boston organization, and there was also the ancient artillery of New York, and some others, making nine all told. In New York these organizations have opened their doors and let in a large number of young men who are doing guard duty, particularly on the waterworks and on the big bridges. I want to know whether they should not be included as part of the National Guard organization that the State is supposed to have. They now include perhaps three or four thousand men.

The CHAIRMAN. They expressly asked to be excluded from that.

Gen. CARTER. There is no organization of the National Guard of that character now in Federal service. We never recognized any

organization that is now in State service. I mean to say we have never recognized any prior to the draft of August the 5th, who did not come in at that time.

Mr. HULL. It is the policy of your department to discourage at the present time the formation of any of these new National Guard units, is it not?

Gen. CARTER. No, sir; we will inspect them and give them Federal recognition, and give them drill pay for drills attended, but we have told them we can not furnish them complete armament and uniforms at the present time. We will get those things as soon as they can be had.

Mr. SHALLENBERGER. I think I can distinguish what you mean. The fact that you would recognize a regiment does not mean that you are going to call them in. That is what they evidently thought at first. They started in on that, and later they found out that it did not mean they were going to be called into the service, and they dropped out.

Mr. HULL. You do not discourage them, but at the same time you do not offer them any encouragement that they will be taken into the Federal service?

Gen. CARTER. We have told them the law makes them available for the draft, and their being brought into the service must depend upon the needs of the Federal Government, and that is a matter that is settled by the President. No units could now be brought in without another draft proclamation.

Mr. HULL. There is no prospect of their ever getting into the service?

Gen. CARTER. I can not say that.

Mr. HULL. It would take a new draft proclamation by the Executive?

Gen. CARTER. Yes, sir.

The CHAIRMAN. Have you any changes to suggest in the estimates as given in the bill before us, as to the amounts of the appropriations?

Gen. CARTER. There is a letter here which was sent to your committee. It says:

In connection with the estimates submitted by this bureau for appropriations for the support of the National Guard for the fiscal year 1919, your attention is invited to the fact that, in accordance with instructions, the estimates were based upon the then existing conditions, viz, that all National Guard organizations, excepting that of Hawaii, had been drafted into the Federal service. The figures submitted, therefore, covered only the probable expenditures for Hawaii and certain minor and general expenses of the National Guard as a whole which would not be obliterated by the draft of the continental National Guard.

Since the date of the submission of the estimates in question, however, new units of the National Guard have been organized in some of the States and have been extended Federal recognition by the War Department.

These new units and probably others that may be organized and recognized before the end of the fiscal year 1919, are unprovided for in so far as estimates for Federal funds are concerned.

As the National Guard of the States ceased to exist on August 5, 1917 (the date of the draft into Federal service), the greater part of the appropriations for the Guard for 1918 will, under the probability that the present war conditions will continue the drafted Guard in the Federal service for the remainder of the current fiscal year, be unused and covered back into the Treasury.

Mr. ANTHONY. What does that mean, that the National Guard ceases to exist?

Gen. CARTER. The National Guard in the States; the units of the National Guard for which this appropriation was made.

Mr. ANTHONY. Not the National Guard as an institution?

Gen. CARTER. No; I do not mean to say that. I mean the troops composing the National Guard in the States. The letter goes on to say:

It is believed that this balance if made available, together with the specific estimates already submitted, will be sufficient to meet the needs of the National Guard for the fiscal year 1919, including all newly organized and recognized units.

As it is impossible to foresee what new units of the National Guard may be organized and recognized up to June 30, 1919, or the amount of Federal support that will be required therefor, it is recommended that the following draft of proposed legislation be forwarded to the Secretary of the Treasury for submission to Congress with request for favorable consideration.

The CHAIRMAN. You are only asking for the unused balance of the present appropriation for the present fiscal year?

Gen. CARTER. That it be reappropriated and made available for the same purposes during the next fiscal year.

The CHAIRMAN. What is the amount of that?

Gen. CARTER. Of the appropriations for 1918, the present balance is \$13,750,000. That will be reduced by our expenditures from now until June 30, 1918.

The CHAIRMAN. That is the only suggestion you have to make with reference to a change?

Gen. CARTER. Yes.

The CHAIRMAN. Have you drafted the language you wish to be used in order to cover that point?

Gen. CARTER. The suggestion was made that the following paragraph be inserted in the bill:

That any unexpended balances remaining on June 30, 1918, in the appropriations "Arming, equipping, and training the National Guard, 1918"; "Arms, uniforms, equipment, and so forth, for field service, National Guard, 1918"; and "Supplying and exchanging Infantry equipment, National Guard, 1918," are hereby reappropriated and made available for expenditures for similar purposes during the fiscal year 1919.

Mr. ANTHONY. I gather that the real reason for turning down that regiment of Nebraska troops——

Gen. CARTER (interposing). We did not turn them down.

Mr. ANTHONY. You refused to take them into the Federal service, as I understand it.

Gen. CARTER. They have never been extended Federal recognition, and have not become National Guards.

Mr. ANTHONY. That is practically turning them down, because the governor stated that the purpose of their organization was to enter the Federal service.

Mr. SHALLENBERGER. I think the Government did not turn them down, but did give them to understand they were not likely to be called into the service.

Mr. ANTHONY. That is what I mean. Is it not true, General, that the real reason the War Department did not take them in was because it would have been a practical recognition of the principal of raising troops by the volunteer system?

Gen. CARTER. No, sir. We took in every man in the National Guard, some 400,000 of them, on August 5, and we now have above 470,000 in those National Guard divisions.

There were a number of reasons that led to the decision—not a number of them, but several reasons. At the present time we are taxing all our resources to supply the men we now have, and to create the necessary reserves to put in France for the use of the troops going over there. We have to accumulate a large amount of supplies.

To take into the service a lot of new men and try to equip them and arm them at this time would add to our burdens. There is no room in the cantonments anywhere for the existing regiments of the National Guard. If we call them into the Federal service we would have to leave them in the States. Later on there will be room in the cantonments for them, and we will be able to furnish them the necessary supplies.

Mr. ANTHONY. You did raise a number of regiments of the National Guard which were drafted into the Federal service practically under the volunteer system?

Gen. CARTER. There were a number of regiments raised just prior to the draft of August 5, but every one of those regiments complied with terms of the law. The officers were those prescribed by section 74. They had had prior military training of some kind. The men had taken the oath and passed the examinations required, by Federal officers, and were in all respects accepted in compliance with the provisions of the act of June 3. Of course, they did not have all the training they should have had, but that was impossible.

Mr. ANTHONY. And you got that number of men, and they came in in a very short period of time?

Gen. CARTER. Yes.

Mr. TILSON. You provide for the payment of the Hawaiian troops?

Gen. CARTER. Yes; they are included.

Mr. TILSON. What do you say in regard to the Hawaiian troops being brought into the Federal Service?

Gen. CARTER. That was discussed at the time they were framing the draft. I am not fully posted as to the reasons, but I think that the fact that they were left there was due to two factors, one was that those troops were originally planned to reinforce the garrison at Hawaii in case of need, and the other was that it was represented if those troops were taken out of there it would unsettle the labor situation in Hawaii and put the people in the sugar business and in other business in a very difficult situation as to the procurement of labor.

Mr. TILSON. What would you say as to their very recent, urgent request of the Congress that we pass legislation bringing them in?

Gen. CARTER. That was in the Philippine Islands. They were not included in the National Guard act of June 3, 1916.

Mr. TILSON. Have you nothing in your estimates for the Philippine Islands?

Gen. CARTER. No; that is not within the jurisdiction of the Militia Bureau.

Mr. HULL. You say you did not use some of the units because you did not have equipment for them or a place to put them, but the War Department afterwards did take the people in under the draft?

Gen. CARTER. No; they had arranged for the draft long before these National Guard units were formed, and they had provided the cantonments for them, and they were getting the clothing for them.

Mr. HULL. If they had taken the organizations in, it would have lessened the number of men they would have drafted?

Gen. CARTER. No; the proclamation fixed the number in the draft. They have not all gotten in yet. We made provision for those men at the time the proclamation was issued, and we have to take those men.

Mr. McKENZIE. Is it not a fact that probably one of the reasons why the War Department took the position that was taken in regard to this matter was due to the fact that notwithstanding the national-defense act provides that the governor shall appoint the officers in the National Guard, and that those officers shall take certain examinations to show their qualifications, that, after all, you would be getting into the organization of this great National Army, perhaps, regiments with picked officers, who might have the favor of the governor or the lieutenant governor, or whoever it might happen to be, who was commissioning these officers in this particular unit of the National Guard, and therefore you would induct into the Army of the United States a regiment or a unit improperly officered, and if you undertook through military channels to kick those fellows out, there would be a howl go up that would be heard across the Atlantic Ocean?

Mr. ANTHONY. Is it not true that the War Department has the authority to pass on the qualifications of those officers, and after they are in the service can put them out again if they are not up to the requirements?

Gen. CARTER. Yes, sir.

The CHAIRMAN. General, I wish you would put into the record a statement showing in detail what each of the items is.

Gen. CARTER. That is included in a letter to the chairman, dated February 1, 1918, reading as follows:

FEBRUARY 1, 1918.

Hon. HUBERT S. DENT, JR.,

*Chairman Committee on Military Affairs,
House of Representatives.*

SIR: Complying with your verbal request, made during the hearing before your committee yesterday on the estimates for the expenses of the National Guard for the fiscal year 1919, for a detailed statement showing the various items making up the estimates, which, as was stated in the record, cover only the National Guard of Hawaii and certain minor expenses of the National Guard in general. I take pleasure in forwarding herewith additional data along the lines indicated. If you should desire any further or more detailed information I shall be very glad to supply it.

In the event the favorable consideration should not be given by your committee to the suggestion that the unexpended balances of this year's appropriation be made available for the fiscal year 1919, in view of the fact that it is impracticable, if not impossible, even to hazard a guess as to what will be the strength or status of the National Guard next year, may I request that opportunity be afforded to present, through proper channels, for the consideration of your committee some other plan whereby there may be assured some adequate provision for the National Guard as it may exist during the year 1919. There are existing National Guard organizations not in the service, in addition to the National Guard of Hawaii, and it is fairly safe to presume that other new National Guard organizations will be formed but to what extent is not known. In addition, it is within the range of possibility that the National Guard now in the Federal service may return and reassume (through reorganization and recognition) a National Guard status. It is with a view to safeguarding the proper maintenance of these organizations by provision for some proper and sufficient appropriations, that I make this request.

Very truly, yours,

J. McI. CARTER,
Brigadier General, National Army. Chief, Military Bureau.

STATEMENT REGARDING ESTIMATES FOR FISCAL YEAR 1919.

Appropriation: "Arming, equipping, and training the National Guard, 1919."

Subappropriation: "Expenses, camps of instruction." Amount estimated, \$150,000.

The enlisted strength of the Hawaiian National Guard for the fiscal year 1918 was approximately 3,000 men. The cost of the encampment held in the fall of the calendar year 1917 amounted to approximately \$135,000. The minimum enlisted strength of the Hawaiian National Guard organizations now recognized by the War Department is approximately 4,500 men, and it is estimated that the cost of an encampment for this number of men would be \$150,000, being based as follows:

	1918	1919
Transportation of officers and enlisted men.....	\$68,000	\$75,000
Pay of officers and enlisted men.....	30,000	34,000
Subsistence of enlisted men.....	32,000	35,500
Incidental expenses.....	5,000	5,500
Total.....	135,000	150,000

Subappropriation: "Expenses, selected officers and enlisted men, military service schools." Amount estimated, \$50,000.

At the time the estimates for the fiscal year 1919 were submitted it was the opinion of this office that many officers and enlisted men of the Hawaiian National Guard would be ordered to military service schools. Under present conditions it is hardly probable that all of the officers and enlisted men that it was originally thought might be ordered to schools will be so ordered, and it is therefore now thought that the amount estimated is too large and should be reduced to \$10,000.

Subappropriation: "Pay and allowances of officers, National Guard, Military Bureau." Amount estimated, \$12,000.

As the Hawaiian National Guard and several new continental National Guard organizations are not in the Federal service, and as the law provides for the assignment of two National Guard officers in the Militia Bureau, the amount, \$12,000, included in the estimate for this purpose was considered a conservative amount in view of the possibility of the assignment of two officers in this bureau during the fiscal year 1919.

Subappropriation: "Pay of property and disbursing officers for the United States." Amount estimated, \$26,000.

This amount was based on the pay for 49 property and disbursing officers, at \$500 per annum, and for the pay of the property and disbursing officer for the Hawaiian National Guard, at \$1,500 per annum, totaling, \$26,000.

Subappropriation: "General expenses, equipment, and instruction, National Guard." Amount estimated, \$50,000.

The funds under this subappropriation are required by law to be apportioned according to the enlisted strength of the National Guard. The strength of the National Guard of Hawaii for the fiscal year 1918 was approximately 3,000 men, and the amount allotted to the Territory was \$28,893.65. The minimum enlisted strength for the organizations of the Hawaiian National Guard now recognized is approximately 4,500 men, and that in proportion to the amount appropriated for the fiscal year 1918, the amount required for the 4,500 men would be approximately \$43,000. The additional \$7,000 was included to meet any incidental and emergency items in connection with the National Guard of Hawaii and the possible increased cost in supplies and stores purchased for and issued to the National Guard of Hawaii.

Subappropriation: "Travel of Federal officers and noncommissioned officers making inspections." Amount estimated, \$5,000.

The amount expended in the fiscal year 1917 for this purpose was approximately \$25,000, and as the Hawaiian National Guard will have to be inspected in the fiscal year 1919 it is thought that the amount estimated is conservative.

Subappropriation: "Travel of Federal officers and noncommissioned officers changing stations." Amount estimated, \$2,000.

There are no figures upon which this estimate could be based, but in view of the possibility of the relief or detail of inspector instructors or sergeant instruc-

tors in connection with the National Guard of Hawaii, it is thought that in all probability the full amount estimated will be required for this purpose.

Subappropriation: "Travel of Federal officers and noncommissioned officers on visits of instruction." Amount estimated, \$15,000.

This amount was not based on any accurate figures, but it is thought that the amount in all probability will be required for the purpose for which estimated in connection with the visits of instruction of inspector instructors and sergeant instructors on duty with the National Guard of Hawaii.

Subappropriation: "Travel of Federal officers and noncommissioned officers, connection with camps of instruction." Amount estimated, \$1,000.

As the Hawaiian National Guard is not in Federal service and as it, under the law, is required to hold an encampment of 15 days each year, it is thought in all probability this amount will be required in connection with these camps.

Subappropriation: "Inspection of material, Field Artillery, Coast Artillery, and Signal Corps." Amount estimated, \$500.

Inasmuch as the Hawaiian National Guard includes Signal Corps and Coast Artillery Corps, the amount estimated is thought will be required for this purpose.

Subappropriations: "Transportation of supplies." Amount estimated, \$10,000.

As the shipments of supplies will be to the Hawaiian National Guard, for which \$100,000 is estimated (\$50,000 under the subappropriation "General expenses, equipment, and instruction, National Guard," general appropriation "Arming, equipping, and training the National Guard, 1919," and \$50,000 under the appropriation "Arms, uniforms, etc., for Field Service, National Guard, 1919"), it is the opinion of this office that the amount estimated is not in excess of what will be required for this purpose.

Subappropriation: "Expenses, sergeant instructors." Amount estimated, \$5,000.

As this subappropriation includes expenses of quarters, fuel, light, medicine, and medical attendance for sergeant instructors, and as the item of quarters alone for eight sergeant instructors detailed with the National Guard of Hawaii would amount to \$2,880, it is thought that the additional amount of approximately \$2,000 is not in excess of what will be required for the other items of expenses for the sergeant instructors detailed with the National Guard of Hawaii.

Appropriations: "Arms, uniform, equipment, etc., for Field Service, National Guard, 1919." Amount estimated, \$50,000.

The funds under this appropriation are required by law to be apportioned according to the enlisted strength of the National Guard. The strength of the National Guard of Hawaii for the fiscal year 1918 was approximately 3,000 men, and the amount allotted to the Territory was \$33,375.60. The minimum enlisted strength for the organizations of the Hawaiian National Guard now recognized is approximately 4,500 men, and that in proportion to the amount appropriated for the fiscal year 1918, the amount required for the 4,500 men would be approximately \$50,000.

Mr. OLNEY. Do you realize that the enthusiasm of the home guards was broken down in the States where home guard organizations were established, because they had no Federal recognition?

Gen. CARTER. I have not kept in touch with that.

Mr. OLNEY. They are men beyond the draft age, in most cases.

Gen. CARTER. We have no connection with that guard, but we are trying to keep in touch with them to find out what force is available, and what there is in the way of possible available military help in the States. I did not know that that feeling had grown up. I suppose every man knows if he wants to serve the Federal Government the way is open in the Regular Army and the National Guard by voluntary enlistment. I had not heard of any such feeling existing that you refer to.

Mr. OLNEY. All of the enlistments in the home guard were of men between 31 and 50 or 60 years of age.

The CHAIRMAN. Has there been any effort made to raise reserve battalions to fill up the ranks of the troops that have been called into the Federal service?

Gen. CARTER. No, sir. The act of May 18, 1917, provided for the draft, and they decided to use that rather than to resort to the system of having reserve battalions, which would be expensive, because we would have to provide camps for them.

Mr. TILSON. Have you still got the depot brigades?

Gen. CARTER. They will have replacement divisions instead of depot brigades.

Mr. SHALLENBERGER. Why did they abandon the depot brigades?

Gen. CARTER. They can have fewer encampments, and there is less overhead cost in the replacement divisions than in a depot brigade for every division.

The CHAIRMAN. Recently there has been a call of a certain percentage of these men to be trained somewhere immediately to go to France. How are they selected? That is depleting some of the State National Guard organizations.

Gen. CARTER. Everybody regrets that, but it is due to the fact that certain special troops have had to be formed at once for service abroad, and they had to take trained men.

Mr. GORDON. Do they call for volunteers?

Gen. CARTER. That depends on the division commander. He might take volunteers, or he might take certain units. Rather than break up an entire unit he would possibly take a few men from each.

The CHAIRMAN. Why was not the plan pursued of selecting a unit instead of picking up 500 men from various units?

Gen. CARTER. Because if you take a unit out of a division, you break up the team. You can take a few men out and replace them with green men, and they will absorb the training very quickly.

The CHAIRMAN. You have taken a regiment out?

Gen. CARTER. No, sir; we have just taken a certain number of men. They have been called on for a certain number of men.

The CHAIRMAN. In the Rainbow Division?

Gen. CARTER. We did not take those men out of organized divisions. We took them from various States. We never had had an organized division such as we have now, fully officered and equipped.

The CHAIRMAN. I believe they were in their home States.

Gen. CARTER. That matter of pulling troops out of divisions has gone considerably further in the National Army than in the National Guard. The National Guard was the last to suffer from it.

Mr. MCKENZIE. One complaint that has come to me has been that a great many officers in the National Guard have been ordered to take efficiency examinations, without any preparation for these examinations, and the people making the complaints contended that in those cases the National Guard officer, in fairness, ought to have been given at least the same opportunity to prepare himself that one of the officers trained at one of the officers' training camps has had; that he should have had the opportunity of three months' training in one of the camps before being ordered to take an efficiency examination. What is there to that?

Gen. CARTER. We have never discharged a man because of lack of technical training. It has been because of his lack of capacity and

fitness. The act specifies very plainly what they may be discharged for. We would not expect a man coming into the service without prior professional training to have that training, and we have been trying to give it to them, where they have shown adaptability. Where they have character and capacity and fitness, we are trying our best to hold on to them and promote all of the best men. Where a man has shown himself not adapted, not a good officer, and not capable to lead men in the field, we did not want him as an officer. He is a round peg in a square hole.

Mr. McKENZIE. I think you are right about that, but it has been brought to my attention that is one of the means of what we might call railroading these officers out of the National Guard; that you would see that a man was incompetent and would not make an efficient officer; and it would be a good way of getting rid of him to order him to take an efficiency examination, and therefore he would be out of the service.

Gen. CARTER. You must have misunderstood that matter, because we have not yet given any of them an examination except in a physical way. We have inquired into their qualifications, conduct, and efficiency; we have called before the boards officers who have had them under their observation; and we have been shown the result of their work; and we have taken into consideration what they have done prior to their entry into the Federal service, what kind of a reputation they had, and then what kind of a record they had made. The boards have considered all this information, and in nearly every instance the majority of the board have been National Guard officers.

We did have some boards who sent in recommendations that officers who were assigned to Field Artillery regiments be discharged because they were not good Field Artillery officers. In every case we have sent instructions to find out whether an officer was capable in any branch of the service, and if he was that, the division commander should transfer him to the branch in which he would be the most useful. If he was incapable of being an officer, we did not want him any longer.

Mr. GREENE. Is there not a certain element in the make-up of an officer that is very important, and that is temperamental fitness? A characteristic adaptability to the military profession may be lacking in many men who may be brilliant geniuses in some other line?

Gen. CARTER. Yes, sir.

Mr. HULL. You admit that one of the crying needs of the Army to-day is good officers?

Gen. CARTER. Yes, sir.

Mr. HULL. Is it not a fact that there is no way by which you can take into the Army a competent officer who has had training, and who has been in the National Guard, at the rank he had in the National Guard?

Gen. CARTER. When you say I have no way——

Mr. HULL. I mean the Army; I refer to the organization.

Gen. CARTER. The President, of course, could appoint that man from civil life. With respect to bringing him into the National Guard I want to say this: That every organization of the National Guard, when it came into the service was fully officered. We were not responsible for the personnel beyond the fact that we said they

were acceptable, and in our judgment efficient. If a man fails to take advantage of the existing military organization in his State, that fault can not be laid at the door of the War Department. Even then, when we brought this National Guard into the Federal service we had to reorganize it. We had to reduce it from nine regiments in a division to four. That made a large number of surplus officers, but we took them and are utilizing them right now, and we will soon have used them all.

In the meantime we could not appoint additional officers to the National Guard, with all of those officers to choose from. We have filled vacancies with those officers, but we could not appoint new men into the National Guard while that list of surplus officers remained.

Mr. HULL. I am not blaming your department. We need officers, and yet we have surplus officers, but for some reason the War Department is not using those officers where they ought to be—on the line.

Gen. CARTER. I do not know. I suppose they have done their very best to get the best men available. Occasionally, of course, some man has been missed who would make a good officer.

Mr. HULL. The case I have particularly in mind has been called to the attention of the Secretary of War, and your department is familiar with it. There is no question about the ability of the man, and yet he can not get back in the service.

Mr. ANTHONY. What did he get out for?

Mr. HULL. After the border trouble he was a judge of the district court. He had all the experience necessary. He simply resigned from the National Guard. It seems to me that when there is an opportunity to get a man of his ability, there ought to be some way to pick up good officers of that kind.

Mr. MORIN. A few weeks ago there were a hundred officers relieved from duty, and among those there were a large number from Pennsylvania who had been in the National Guard for a great many years. Were all those men relieved from duty because of physical disability?

Gen. CARTER. I do not remember. A considerable number were found to be physically deficient when examined with a view to their going on foreign service. I do not remember what particular officers you refer to.

Mr. MORIN. I have in mind one particular officer who, in my judgment, is one of the best men you could have gotten. I refer to Col. Kearns. He is a lawyer by profession, but he has been in the National Guard for 20 years. He is just 44 years of age. He was colonel of what was formerly the Eighteenth Pennsylvania, and what is now the One hundred and eleventh Regiment at Camp Hancock. He is a man about 6 feet 3 inches tall, and in condition he weighs about 205 pounds. He looks to be in perfect health, but he was discharged. He said the only reason he could assign for that was physical disability, and the physicians at home who examined him could not find anything wrong with him. I think if there is any other reason besides his physical qualifications, he ought to be told what they are. It seems to me he should be assigned to some other duty, and not be discharged.

Gen. CARTER. When we are organizing this same kind of troops later for home duty he could be. But these divisions are now being

organized and prepared for service in France, and that is a very difficult and hazardous service. There have been a number of men who have gone over there who have broken down, and we are trying now to avoid that.

Mr. MORIN. This man is a big, active man, and in good physical health, and has had 20 years of service in the National Guard. He organized the regiment of which he was colonel, and it is the biggest uniformed regiment in the country.

Gen. CARTER. His examination was made by a board of officers who took an oath to find according to the evidence, and the surgeons were the division surgeons. I do not remember whether he was one of the men who was given a reexamination.

The CHAIRMAN. General, I will ask you to put into the record a statement showing the details of each item of your estimate.

In reference to the paragraph on page 68, "To provide for pay and allowances of officers of the National Guard assigned to duty in the Militia Bureau, \$12,000," there never have been any National Guard officers assigned there?

Gen. CARTER. There was one last year for quite a while. If we got some National Guard in, we would like to have those men.

The CHAIRMAN. You would like to have that item carried in the bill?

Gen. CARTER. Yes; a portion of that amount has been expended.

(Thereupon, the committee adjourned to meet to-morrow, Friday, February 1, 1918, at 10.30 o'clock a. m.)

ARMY APPROPRIATION BILL, 1919.

COMMITTEE ON MILITARY AFFAIRS,
HOUSE OF REPRESENTATIVES,
Wednesday, February 6, 1918.

The committee this day met, Hon. S. H. Dent, jr. (chairman), presiding.

STATEMENT OF MAJ. GEN. HENRY P. MCCAIN, THE ADJUTANT GENERAL OF THE ARMY.

The CHAIRMAN. General, there is one item in the bill that relates to your department, on page 5—I believe that is the only one you are asking for—"contingencies"?

Gen. McCAIN. Heretofore we have asked for \$7,500. The increase is due to the increase of the Army and the increase of the tactical divisions and districts. I believe it is as low as we could very well make it, with any assurance that they will get the articles that they need at these headquarters.

The CHAIRMAN. \$15,000 was not sufficient last year?

Gen. McCAIN. I think it was last year, but it is increasing all the time and it will be greater next year.

The CHAIRMAN. I have a list of items upon which I want Gen. McCain to give us some figures.

What is the total enlisted strength of the Army?

Gen. McCAIN. The total enlisted strength of the Army on January 31, as near as could be estimated, was 1,479,259.

The CHAIRMAN. How is that divided between the Regular Army and the National Army?

Gen. McCAIN. Regular Army, 493,105; National Guard, 430,554; Reserve Corps, 74,750; and National Army, 480,850.

Mr. GORDON. Is that all?

Gen. McCAIN. That makes the total.

The CHAIRMAN. What is the total number of officers of the line in each branch of the service?

Gen. McCAIN. Regular Army, 7,452; National Guard, 13,803; Reserve Corps, 39,717; and National Army, 2,879; making the total on January 31, 63,851.

Mr. ANTHONY. What date is that?

Gen. McCAIN. January 31, 1918.

The CHAIRMAN. Have you the figures to show how they are divided among the different branches of the service?

Gen. McCAIN. Do you mean Infantry, Cavalry, etc.?

The CHAIRMAN. Yes, sir.

Gen. McCAIN. No. We have been interchanging them. Those, for instance, in the National Army and the Reserve Corps we have

been assigning to duty wherever they could best serve. I can get that information.

The CHAIRMAN. I should be glad if you would.

Mr. GORDON. Does this total enlisted strength, 1,479,259 include officers and men?

Gen. McCAIN. No; just the enlisted men.

The CHAIRMAN. Please give us the numbr of officers of the staff.

Gen. McCAIN. In the staff corps, general staff, 80; Adjutant General's Department, 384; Inspector General's Department, 44; Quartermaster's Corps, 6,638; Medical Corps, 26,009; Dental Corps, 5,405; Veterinary Corps, 2,009; Judge Advocate General's Department, 201; Engineer Corps, 6,526; Ordnance Department, 4,503; Signal Corps, 9,823; Bureau of Insular Affairs, 2; chaplains, 498; professors at Military Academy, 7; total January 31, 1918, 62,129.

Mr. ANTHONY. Of what kind, the staff?

Gen. McCAIN. Yes, sir; that is the staff.

Mr. SHALLENBERGER. Staff officers?

Gen. McCAIN. Yes, sir.

Mr. ANTHONY. You have as many staff officers as you have line officers?

Gen. McCAIN. Yes, sir.

The CHAIRMAN. Can you tell us how many of the reserve officers are on active duty?

Gen. McCAIN. I have given the total number of reserve officers. 39,717.

Mr. GREENE. What proportion, if any, is on active duty now?

Gen. McCAIN. I think they are all on active duty. If they are not called to active duty in a reasonable time we discharge them.

Mr. ANTHONY. These medical officers, 26,009, are they on active duty?

Gen. McCAIN. Yes, sir; practically all of them. You will find that from time to time they relieve a man from active duty if they do not need him, and put him on the inactive list, but practically all of the officers in the Reserve Corps are on active duty now.

The CHAIRMAN. Are the 39,717 included in the total number of line officers, that is, included in the 63,851?

Gen. McCAIN. Yes, sir.

The CHAIRMAN. That is the number of line officers assigned to the Regular Army, the National Guard, and the National Army?

Gen. McCAIN. Yes, sir.

Mr. GREENE. How many reserve officers?

Gen. McCAIN. Fifty thousand six hundred and forty-eight reserve officers in the staff.

Mr. GREENE. Those are all on active duty?

Gen. McCAIN. As I said, they are practically all on active duty. You will find not all on active duty, but practically all.

The CHAIRMAN. They are included in the total number of staff officers?

Gen. McCAIN. Yes, sir.

Mr. TILSON. They are not receiving pay?

Gen. McCAIN. Yes; all on active duty.

Mr. TILSON. But those not called?

Gen. McCAIN. They do not receive any pay.

The CHAIRMAN. What was the strength of the Regular Army on April 1 last?

Gen. McCAIN. Officers, 5,791, and enlisted men, 121,797.

The CHAIRMAN. What was the strength of the National Guard on the same date?

Gen. McCAIN. Officers in Federal service, 3,733, and in State service, 3879; enlisted men in Federal service, 76,713; and in State service, 97,295.

Mr. SHALLENBERGER. The National Guard?

Gen. McCAIN. Yes; that is the National Guard. That made a total on April 1, 1917, of officers, 7,612, and enlisted men, 174,008.

The CHAIRMAN. Please state in the same way the strength of the Regular Army and the National Army on June 5?

Gen. McCAIN. Regular Army officers, 6,341, and enlisted men, 190,068; National Guard in Federal service, officers, 3,787, and in State service, 4,602; enlisted men in the Federal service, 90,362, and in the State service, 138,063. Total strength June 5, 1917, officers, 8,389, and enlisted men, 228,425.

The CHAIRMAN. That is the total, both State and Federal service.

Gen. McCAIN. Yes, sir.

The CHAIRMAN. Please give us the similar figures for September 1, 1917.

Gen. McCAIN. Officers in the Regular Army, 7,022, and enlisted men, 308,145; National Guard, all in the Federal service, officers, 12,945, and enlisted men, 350,225.

The CHAIRMAN. All in the Federal service?

Gen. McCAIN. Yes; at that time.

The CHAIRMAN. You have already given us the total strength of the drafted men up to January 31?

Gen. McCAIN. No; I did not give you that. The total drafted men on February 4, 1918, was 531,144.

Mr. TILSON. What status do you give a man if he is drafted and is then sent to a National Guard organization as many thousands were; is he a National Army man or a National Guard man after that?

Gen. McCAIN. Our regiments are all numbered serially and he belongs to a certain regiment of the United States Army.

Mr. TILSON. But you seem to have a sort of distinction running all the way through between the National Army and the National Guard. Here are a number of men drafted who normally would belong to the National Army, but, as a matter of fact, they were sent to fill vacancies in the National Guard?

Gen. McCAIN. That is true, and not to the Regular Army. The distinction has been kept up to the time, but that is now fading away and it is all one Federal Army.

Mr. TILSON. Do you not think that it should all be wiped out?

Gen. McCAIN. Absolutely; and we are doing that just as far as we can.

Mr. TILSON. Do you not think that there should be a freer interchange of officers among the National Guard, the National Army, and the Regular Army?

Gen. McCAIN. We are trying to figure that now; we want that.

Mr. SCHALLENBERGER. The enlisted men taken in the National Army and taken in the National Guard are counted here in the Na-

tional Guard? Your figures do not balance with the report of the Provost Marshal General, which shows that over 500,000 men were called out by draft, while your figure for the National Army is 480,000. So those men must have been sent to different places?

Gen. McCAIN. You can not keep track on that. They are sent to fill vacancies wherever needed.

Mr. SHALLENBERGER. Either in the National Guard or the Regular Army?

Gen. McCAIN. Wherever they come in. We have taken the National Guard from the last returns that we got by regiments.

Mr. SHALLENBERGER. It does not follow that a National Guardsman is a volunteer, because he may have been drafted and put over there?

Gen. McCAIN. You can not count on who is a volunteer and who is a drafted man.

Mr. McKENZIE. It would not do, in order to find out the total number of men in the service, to add the last figure you have given to the number of men in the National Guard and the Regular Army?

Gen. McCAIN. No.

Mr. McKENZIE. This figure is simply useful in showing the number of men drafted, not the number of men in the service.

Gen. McCAIN. The figures in the top are the only safe figures—that is, on the 31st of January.

The CHAIRMAN. The next item, General, is the dates when the drafted men were called and the number of men in each call. After I made that memorandum, I found that was really in Gen. Crowder's report. I suppose you have it?

Gen. McCAIN. Yes, sir. On September 5, 1917, 31,486. Those were the accepted men from the call.

The CHAIRMAN. The men actually accepted.

Gen. McCAIN. Yes, sir. September 5, 1917, 31,486; September 19, 1917, 261,319; September 26, 1917, 428; September 28, 1917, 19,004; October 3, 1917, 132,386; October 27, 1917, 42,901; November 2, 1917, 6,819; November 19, 1917, 17,251; December 5, 1917, 8,445; December 14, 1917, 905; December 19, 1917, 9,000; December 21, 1917, 1,000. and February 4, 1918, 200, making a total on February 4, 1918, of 531,144. A call has been made for February 23, 1918, for 74,506, making a grand total called to date of 605,650.

Mr. ANTHONY. All except the last 74,000 will be in your total?

Gen. McCAIN. Yes, sir.

Mr. GORDON. The 200 called for February 4 do not appear up to January 31?

Gen. McCAIN. The figures I gave you were for February 4. The total number of drafted men to date is 531,144, with another call out for the future.

The CHAIRMAN. The next item is the number and kind of technical troops, and how many, if any, were drafted?

Gen. McCAIN. Technical troops have been secured both by volunteer enlistment and by draft. I have not those separately put down.

The CHAIRMAN. What do you mean by that, that you have gone out and drafted men especially for these technical troops, or have taken the technical men from the regular draft law?

Gen. McCAIN. We do both. If some of the technical corps want certain men, we ask the Provost Marshal General—he has that so he can do it now—to give us so many men possessing certain qualifications.

Mr. GORDON. Only from those liable to the draft?

Gen. McCAIN. No, sir. We have also to fit that occasion an index of the men in the National Army. We have about completed the index of the men in the National Army and we are engaged in indexing all of those in the Regular Army. We will in a short time have every man measured and know what he is best fitted for. When one of the chiefs of bureaus wants a certain number of men possessing certain qualifications he makes a requisition on The Adjutant General and we distribute that call over the different divisions, telling the division commanders to furnish so many men possessing these qualifications and to send them to a certain point. We have to follow that rule. We found that it was confusing for anybody to go into a division and say, "I want these men," by name, because he would take the very men that the division commander wanted. They protested, and instead of doing that, we ascertain what each division commander has and we call on him to furnish his proportion of men possessing these qualifications. In that way we accomplish the same purpose and at the same time preserve the organization of the division.

Mr. TILSON. You say in proportion to the number of each kind of men in each division?

Gen. McCAIN. Yes, sir.

Mr. TILSON. For instance, if there is a large number of one particular kind of troops in one particular division your quota from that division would be much larger for that particular kind of man?

Gen. McCAIN. That is right.

Mr. SHALLENBERGER. You have spoken of furnishing men for special service. If a man is in class 2, a skilled mechanic, and you do not find what you find in class 1, do you go into class 2 and transfer him?

Gen. McCAIN. I do not know that that question has ever been raised. So far we have not found it necessary. That would be for the Provost Marshal General to determine. We ask for certain men possessing certain qualifications, and he goes out and gets them.

Mr. SHALLENBERGER. He stated yesterday in his testimony that he already was expecting to have to invade class 2. He had stated to us before that he was expecting to get his Army from class 1, in all human probability.

Gen. McCAIN. He may have to go there.

Mr. SHALLENBERGER. Would you think that under the law he would have the authority to do that, notwithstanding that the man had been put into class 1 and his number was far back on the call he still can invade any of these and reach out and pick the man?

Gen. McCAIN. I think absolutely, because that is divided into classes by regulation.

Mr. SHALLENBERGER. Even after in the class they can change to the other class?

Gen. McCAIN. Yes, sir.

Mr. SHALLENBERGER. Then, if a man is in any particular class he is liable to be drawn?

Gen. McCain. Yes.

Mr. Garrett. It is an advantage to be in any class except 1.

The Chairman. Please give us the number and kind of these technical troops and what branches of the service they are connected with?

Gen. McCain. The Engineers have a total of 119,476 enlisted men.

Mr. Greene. What is the date?

Gen. McCain. This is under date of January 21. It is practically correct, although it is changing all the time, every day.

Mr. Gordon. Just enlisted men?

Gen. McCain. Yes, sir.

Mr. Kahn. Men enlisted?

Gen. McCain. Yes, sir.

Mr. Shallenberger. Those men are all in the Regular Army?

Gen. McCain. No; these are not all in the Regular Army. This is in the Engineer Corps.

Mr. Anthony. These men will all be in addition to the total figure you gave us for the strength of the line?

Gen. McCain. No; they are included.

Mr. Shallenberger. They are scattered all through the Army, some of the Regular Army, and some of the National Army?

Gen. McCain. Everything, volunteers and everything.

Mr. Shallenberger. They are not confined to any particular branch?

Gen. McCain. You might say that they have absolutely the same status, because as soon as the war is over they can go, every one of them.

Mr. Shallenberger. Why do you call them engineers; are they of the National Army, the Regular Army, or the National Guard?

Gen. McCain. Most of them are in the National Army, but we do not make any distinction. We call that the Engineer Corps. We are not making any distinction there.

The Chairman. Let me see if I understand you, General. The number of these technical troops which you are giving us now are included within the 1,479,259 total enlisted strength of the Army, or are they in addition to that?

Gen. McCain. This is in addition to that. The others are the line.

The Chairman. In addition to the 1,479,259 which you have already given us?

Gen. McCain. Yes, sir.

The Chairman. Please proceed to give us those figures and then we will ask questions.

Gen. McCain. Ordnance Department, 20,000.

The Chairman. Enlisted men?

Gen. McCain. Yes, sir. Signal Corps, 151,747.

Mr. Shallenberger. Those are not additional to the 1,479,000?

Gen. McCain. Yes, sir.

The Chairman. These are the organizations, as I understand, of technical troops provided for in section 4 of the act of May 18, which are in addition to the Regular Establishment?

Gen. McCain. Yes, sir.

Mr. Fields. You have in the Ordnance Department 20,000 enlisted men at the present time?

The CHAIRMAN. Up to January 21.

Mr. FIELDS. When Gen. Crozier was before the committee he said that the number was 5,000.

Mr. KAHN. Up to the 1st of January, I think he said.

The CHAIRMAN. The figures which Gen. McCain is giving us have been taken right from the records of his office and they are bound to be the accurate figures.

Mr. SHALLENBERGER. The figure you have given—1,479,259—is that the enlisted strength of the Army?

Gen. McCAIN. Of the line of the Army. Quartermaster's Department, 140,266; Medical Department, 84,700, including 16,000 in the Veterinary Corps.

Mr. CALDWELL. Sixteen thousand even?

Gen. McCAIN. Yes, sir. That is as near as we can get it right now. I do not think that anybody would be safe in swearing to any of these figures, because they are changing every day.

The CHAIRMAN. They do not change to any appreciable extent?

Gen. McCAIN. No; they are going out and coming in.

The CHAIRMAN. Is that all of the technical troops?

Gen. McCAIN. In the question of sanitary troops established by General Order No. 80, 1917, I find this notation. The total number of commissioned officers, "may be approximated equal to, but not to exceed one for every 1,000 of the total strength of the military forces, authorized from time to time pursuant to law." Allowing one sanitary officer for every 1,000 as above quoted and distributing proportionately "among the several grades as in the Medical Corps, now established by law," the number of commissioned officers in each grade would be as follows: Majors, 484—

Mr. SHALLENBERGER (interposing). In the Sanitary Corps?

Gen. McCAIN. Yes, sir; captains and lieutenants, 1,016, making 1,500 officers, and the total enlisted strength of the Sanitary Corps at the present time is 3,945.

Mr. QUIN. Does that include the officers?

Gen. McCAIN. No; officers 1,500, and enlisted men 3,945.

Mr. SHALLENBERGER. Have you those 1,500 officers?

Gen. McCAIN. Yes; they have those men right now, I think.

The CHAIRMAN. Have you the total enlisted strength of the technical troops?

Gen. McCAIN. No; I have not.

The CHAIRMAN. You have not any figures to show how many of these technical troops were drafted and how many were volunteers?

Gen. McCAIN. No; I have not those separated.

The CHAIRMAN. Can you put that information into the record?

Gen. McCAIN. I do not know whether we could ever get that, unless we went into the record of every man, but I can make an effort to get it.

Mr. KAHN. They are being inducted into these branches every day?

Gen. McCAIN. Yes, sir; and they are all mixed up.

Mr. ANTHONY. You have the total number of men drafted, and if you subtracted that from the total number of men in the Army then you would have the number of volunteers?

Gen. McCAIN. No. As to how many were volunteers and how many were drafted men in the technical corps, when they want a

thousand men in the technical corps, we will send to the division commander or to a department commander and we will call on them indiscriminately, Regular Army, National Guard men and drafted men and they will send the one thousand. They may be all mixed together and there is absolutely no way to tell, unless you went into the record of each one, who was a volunteer and who was a drafted man.

Mr. KAHN. As a matter of fact, up to the 15 of December. I think it was, you allowed the men who had been drawn under the draft to volunteer in these different technical corps?

Gen. McCAIN. Yes, sir.

Mr. KAHN. A drafted man can still go into these technical corps and they do go into the technical corps by induction from the local board?

Gen. McCAIN. Yes, sir.

Mr. KAHN. So that those men probably go into the branches of the service that they think they can do the best work in, but they probably would not volunteer if they had not been drafted?

Gen. McCAIN. I think that is true.

Mr. GARRETT. The recent order was issued to prevent that.

Mr. KAHN. No.

Mr. ANTHONY. That would be a comparatively small number out of the total?

Mr. KAHN. I do not know what it figures up, but I understand it is pretty considerable.

The CHAIRMAN. I understood you to say very explicitly that the total figures 1,479,259 of the Regular Army, National Army, and National Guard were not included in the total figures of the special and technical troops?

Gen. McCAIN. That is right.

Mr. WISE. For instance, some technical branch wants 1,000 or 2,000 men. You then send out to the different departments to give you so many men to be assigned. Are those deducted or have they been counted?

Gen. McCAIN. These are based on the most reliable returns that we can get. The returns are all very slow in coming in.

Mr. WISE. He might count the same man twice?

Gen. McCAIN. No; the figures here are supposed to separate them.

Mr. ANTHONY. Is there such a corps in the Army as the insurance corps?

Gen. McCAIN. No, sir.

Mr. ANTHONY. I have noticed enlisted men wearing a uniform that said they were attached to the insurance corps?

Gen. McCAIN. We detail them there for duty to help out the insurance business.

Mr. ANTHONY. How many men have you detailed with the insurance division?

Gen. McCAIN. I can not tell you.

Mr. ANTHONY. They are regularly enlisted men?

Gen. McCAIN. I can tell you how it is worked in this country. At the headquarters of a division or post the commanding officer or general has detailed men to do this very line of work. He has not transferred them. We have sent over to France a number of officers.

specially commissioned for that purpose. They are commissioned in the National Army and detailed to this duty. There is no distinct corps. They are all detailed. We commission them, it is true, because of their knowledge of the insurance business.

Mr. ANTHONY. Have some enlisted men been sent to France?

Gen. McCAIN. They have been commissioned in the National Army and detailed to the insurance people. There is no distinct corps.

The CHAIRMAN. The next question relates to the number of National Guard officers discharged for inefficiency and the proportionate number of officers discharged from the Regular Army and the National Army, together with data showing what was done with the surplus officers by reason of the organizations?

Gen. McCAIN. By action of the efficiency board under the provisions of section 9 of the act of May 19, 1917, 6 colonels, 1 lieutenant colonel, 6 majors, 33 captains, 36 first lieutenants, and 31 second lieutenants, a total of 113.

Mr. GREENE. Up to what date?

Gen. McCAIN. Up to the present time.

Mr. ANTHONY. Were there not some brigadiers and major generals?

Gen. McCAIN. That is for inefficiency. By reason of disability under section 9 of the act of May 19, 1917, 1 major general, 5 brigadier generals, 13 colonels, 10 lieutenant colonels, 31 majors, 96 captains, 81 first lieutenants, and 49 second lieutenants, making a total of 288.

By resignation, 1 colonel, 3 lieutenant colonels, 11 majors, 68 captains, 97 first lieutenants, and 81 second lieutenants, making a total of 261.

Mr. TILSON. Right in that connection, in a number of those really inefficient cases, they are permitted to resign. I have heard of a number of cases where a board sat and the man then was given the privilege of resigning.

Gen. McCAIN. Some went out that way.

Mr. CRAGO. You do not have any brigadier generals in the resignation list?

Gen. McCAIN. There is actually one, but he is not on this list.

Mr. CRAGO. One already in?

Gen. McCAIN. He has resigned.

Mr. TILSON. Do you know whether it was a bona fide case of resignation or an enforced resignation by reason of a board of efficiency?

Gen. McCAIN. I think really a board of efficiency would have been called, but I do not like to put it that way.

The CHAIRMAN. There were 662 officers separated from the service of the National Guard by reason of resignation, disability, and inefficiency. You have some other figures with respect to that question.

Mr. FIELDS. Most of those resignations were asked for?

Gen. McCAIN. There is nothing to show that they were. They resigned for one reason or another, ill health, etc.

Mr. SHALLENBERGER. And a great many of them on account of business, I presume?

Gen. McCAIN. Yes, sir.

The CHAIRMAN. Can you give us the proportion that these figures bear to the Regular Army and the National Army?

Gen. McCAIN. I have this memorandum: Disposition of National Guard officers who were rendered surplus through consolidation of

regiments. The following organizations have been utilized as pioneer regiments for corps and Army troops: First New Hampshire Infantry, Fifth Massachusetts Infantry, Sixth Massachusetts Infantry, Eighth Massachusetts Infantry, First Vermont Infantry, First Connecticut Infantry, and First Maine Heavy Field Artillery. All of the officers of those regiments were carried as surplus.

Mr. SHALLENBERGER. Carried as what?

Gen. McCAIN. Carried as surplus. The following organizations were turned over to Gen. Carleton to be organized into corps and Army troops: The First, Tenth, Twelfth, Fourteenth, Forty-seventh, Seventy-first, and Seventy-fourth New York Infantry. All of these officers were considered as surplus, and, in addition, the following officers have been sent to Gen. Carleton: 2 colonels, 1 lieutenant colonel, 12 majors, and 45 captains.

The CHAIRMAN. Sent to whom?

Gen. McCAIN. Gen. Carleton, who is organizing these Army troops.

Mr. TILSON. Where?

Gen. McCAIN. Down at Camp Green.

Mr. ANTHONY. What kind of troops?

Gen. McCAIN. Corps troops. They are auxiliaries. We want a regiment here and there.

Mr. TILSON. A sort of depot brigade idea?

Gen. McCAIN. No, sir. As soon as the corps is organized they go along as a part of the corps.

Mr. SHALLENBERGER. Are there any corps there new?

Gen. McCAIN. No; we have not the organization.

Mr. SHALLENBERGER. Officers but no troops?

Gen. McCAIN. Officers for those regiments. We are sending the men there all the time.

Mr. ANTHONY. Organizations organized for special duties?

Gen. McCAIN. Yes, sir. They belong as a part of a corps. A corps must have a lot of auxiliary troops, Cavalry for special purposes, etc.

Mr. ANTHONY. You used the word "pioneer" troops?

Gen. McCAIN. Yes; that does not refer to these.

Mr. KAHN. Do you use the pioneers for mining?

Gen. McCAIN. All sorts of special work. It is not so much mining, but all sorts of technical work which belongs to the corps as distinct from an organization of Engineers, Signal Corps, and other troops. They belong to the corps commander and are commanded by him and utilized by him as he sees fit.

Mr. TILSON. What kind of an organization is that?

Gen. McCAIN. There will be regiments and brigades, just according to the number they have and the strength of the corps. It is a regularly organized, straight organization.

The following officers have been assigned to the National Cavalry regiments: 6 majors, 46 captains, 7 first lieutenants, and 7 second lieutenants.

The following officers have been assigned to the Artillery park: 1 lieutenant colonel and 1 major.

The following officers have been assigned to ordnance training camp at Camp Sheridan: 1 major and 20 captains. Thirty others are to be appointed later.

Appointed in Signal Corps: 1 major and 2 captains.

Appointed in Ordnance Department: 1 captain.

Ordered to service abroad: 1 lieutenant colonel.

To brigade and field officers' school: 4 colonels and 2 lieutenant colonels.

All National Guard divisions ordered overseas have taken with them surplus officers to be used in filling vacancies.

Remaining surplus officers are attached to divisions and are being utilized in various capacities, such as billeting officers, instructors in schools, range officers, etc. They are being absorbed in divisions as rapidly as vacancies occur, and are being called for by Ordnance Department and Signal Corps for such duties as those departments require. With numerous requisitions for officers for various duties, all surplus officers will soon be absorbed. No surplus National Guard officers have been absorbed in a lower grade than that held by them at the time.

The CHAIRMAN. I think that covers everything, except that you have not given us the number of Regular Army officers and those in the National Army who have been discharged for inefficiency or disability.

Gen. McCAIN. In the Regular Army two second lieutenants, on account of inefficiency, and the appointments of eight first lieutenants have been terminated. In the National Army the appointments of four first lieutenants have been terminated.

Mr. TILSON. How do you account for the casualties among the National Guard being so much greater than among the other service?

Gen. McCAIN. Probably they were not subjected to the same examination as these other people when they entered the regular service or the National Army.

Mr. TILSON. Do you not think that there is a probability that these National Guard officers have not been utilized to the best advantage possible? I know of good material among the National Guard officers.

Mr. GORDON. That is only one-eighth.

Mr. TILSON. But one-eighth is a large number, and when you see such a small percentage of Regular and National Army officers being put out of the service, it seems strange that there are so many National Guard officers.

Mr. CRAGO. Maybe this will explain that: We asked for the proportion of National Guard officers who had been discharged by reason of disability, resignation, or inefficiency, and the proportion between the ones rendered surplus and the ones who were still in command of troops. In other words, there is an impression that because of the fact that these men were rendered surplus that they were immediately subjected to a test of whatever kind requiring them to get out of the service. That is the impression that is abroad. I do not know that it is true.

Gen. McCAIN. I do not think that is true. Of course, they all grow out of the proceedings of a board. The Secretary has given instructions that they shall be examined by a board which will always be composed of a majority of National Guard officers.

Mr. CRAGO. That rule has been followed?

Gen. McCAIN. The Secretary has ordered that now. That has not always been the rule.

Mr. GARRETT. That is a very recent rule.

Gen. McCAIN. It has not always been done.

Mr. GARRETT. Before that the board was composed of a majority of the other branch of the service?

Gen. McCAIN. I do not know; I can not say.

Mr. CRAIG. Composed entirely of the other branch?

Gen. McCAIN. No attention was paid to that, so far as I know. In some cases, in one case I have in mind, it was not possible to convene a majority of National Guard officers for the reason that officers of the appropriate rank were all attending the field officers' school at Fort Sam Houston, but in the future that will be followed.

The CHAIRMAN. That is all the data you have?

Gen. McCAIN. Yes, sir. There was another question asked about debts of officers when commissioned. That was section 1 of Bulletin 69, War Department, December 12, 1917.

The CHAIRMAN. There is one other question. Do those figures show how many surplus officers are now unassigned?

Gen. McCAIN. No.

The CHAIRMAN. Can you put that in the record?

Gen. McCAIN. I think I can get that and put it in the record, Mr. Chairman.

Mr. SHAULENBERGER. Are those surplus officers all National Guard officers?

Gen. McCAIN. Yes, sir.

The CHAIRMAN. One of the members of the committee asked me to have you put into the record the order prohibiting the discharge of an officer for debt, that was existing at the time he was commissioned.

Gen. McCAIN. That was section 1, of Bulletin 69, War Department, December 12, 1917, which reads as follows:

The War Department, department and division commanders, or other military authorities, during the continuance of the present emergency, will not take notice of, or concern themselves with, the obligations assumed, transactions occurring, or domestic or personal controversies arising, prior to the entry of officers of the National Army and of forces composed of former members of the National Guard into the service of the United States; nor of any matters of like nature occurring or arising after entry into the military service unless the facts presented bring the conduct of the officer within the provisions of the Articles of War; and that with respect to all such transactions and controversies the parties concerned shall be left to the remedies afforded by the civil courts.

Mr. FIELDS. Following that up, where the resignation of an officer has been asked for because he owed debts when he went into the service, or that were brought about after he went into the service, by reason of his property being taken away from him by reason of a defective title, what is the policy of the department with regard to that kind of a case?

Gen. McCAIN. I think that each case should be judged on its own merits. If the conduct is such as to bring at the time discredit on the service or is liable to bring about scandal to the service or to so affect the officer that the soldiers of his command will cease to have respect for him, the War Department could not help but take cognizance.

Mr. FIELDS. I have in mind a specific case, where a man who had been a National Guard officer for 12 years, a very high-class citizen.

had invested his means in coal lands and had started the operations of coal mining. When the call came for troops on the Mexican border, in 1917, he went to the border. During his stay there the title to his property was contested, the case was tried during his absence, and judgment was rendered against him and his property swept away from him. It left him in debt several thousand dollars—the debts he had incurred in preparing to finance this operation. A great many of his friends advised him to go into bankruptcy, that the debt was so big he could not meet it, but he refused to do so, and he and his brother, who is also an Army officer, decided that they would pro rate all they could spare of their salaries on a percentage basis among his creditors, which it seems to me was the only thing an honest man could do. Some of the creditors filed a complaint with his superiors and his resignation was asked for on the ground that he owed these debts. I wondered what the policy of the department was in cases of that character.

Gen. McCAIN. So long as an officer is acting in good faith, the way you state it, I do not think the department would look upon it as detrimental to the officer.

Mr. FIELDS. If I have presented it correctly, the officer who asked for this man's resignation evidently exceeded his authority and violated the suggestion of the order which you have just read.

Gen. McCAIN. As a matter of fact, whatever I would say on that point would be just my own individual view. Personally, under the statement of facts which you have given, I would not ask for an officer's resignation.

Mr. FIELDS. Here is the point I want to make. It seems to me it puts a good many men who might be drafted into the service in a very embarrassing position. Many men within the draft age are men who have been engaged in business and have probably incurred financial obligations, because the business of the country is largely run that way. These men, we will say, are drafted, and they are men of business ability, probably the most apt men to make good officers, but if the case I referred to is to be followed by the department and these men are to be put in an embarrassing position, they do not dare to ask for a commission or try to get a commission for fear that as soon as they get a commission complaint will be filed against them because they are in debt and they will be sent from the Army under disgrace which they can never outlive.

Mr. GORDON. That probably led to the promulgation of the order which the general has read.

Mr. FIELDS. I was aware of the order. I wanted to know if men in the field were honoring this order or were going ahead in violation of the suggestion of the order and asking for the resignation of these men.

Mr. GORDON. Was the resignation asked for after the order was made or before?

Mr. FIELDS. After.

Mr. CALDWELL. What is the rate now at which volunteers are entering the service, about how many a day?

Gen. McCAIN. It varies every day, but the last figure I have is 740 volunteer enlisted men enlisted on February 4.

Mr. CALDWELL. Does that include those inducted into the service through the local board?

Gen. McCAIN. No; volunteer enlistments. This is a report of the recruiting officers which shows the recruits. It does not include any reenlistments, and does not include any enlistments made in the field. It includes the enlistments at the general recruiting stations throughout the country.

Mr. CALDWELL. You say it does not include the enlistments in the field?

Gen. McCAIN. It does not. We have no report of any enlistments which might have been made in the field by organizations.

Mr. CALDWELL. I do not quite get that. Suppose a man went to an army corps where there was a regiment and said he wanted to join, they have authority to take him in?

Gen. McCAIN. Yes, sir. That is not included. There are comparatively few of those. We have to wait until we get the returns.

Mr. CALDWELL. The marines that are in France are under the jurisdiction of the Army. Have you any record of how many of those we have under the jurisdiction of the Army now?

Gen. McCAIN. No, sir; I have not. We have a brigade there.

Mr. GORDON. Enlistments in the Marine Corps are not included in the figures you have given?

Gen. McCAIN. No, sir.

Mr. CALDWELL. You have a brigade there?

Gen. McCAIN. Yes, sir; and replacement troops of a certain number.

Mr. CALDWELL. Did you include in the engineers the foresters?

Gen. McCAIN. Yes; I included everything.

Mr. CALDWELL. The foresters are a part of the engineers?

Gen. McCAIN. Yes, sir.

(Thereupon the committee adjourned to meet to-morrow, Thursday, February 7, 1918, at 10.30 o'clock a. m.)

COMMITTEE ON MILITARY AFFAIRS,
Thursday, February 7, 1918.

The committee this day met, Hon. S. H. Dent, jr. (chairman), presiding.

**STATEMENT OF MAJ. GEN. HENRY P. McCAIN, THE ADJUTANT
GENERAL OF THE ARMY—Continued.**

The CHAIRMAN. General, you want to make some corrections in the figures which you gave the committee yesterday?

Gen. McCAIN. Yes, sir. I was in error in stating that the staff departments were not included in the total of 1,479,259. They are. That number includes all the enlisted men we have in the Army of every description.

The CHAIRMAN. By the staff departments, you mean the technical troops as well as the regular troops?

Gen. McCAIN. Yes, sir; everything we have in the way of enlisted soldiers is included in that figure.

As to the Signal Corps I gave the authorized figures yesterday, which were not exactly correct, and the Quartermaster's Department did not report their number exactly right. I should like to restate the figures.

Mr. SHALLENBERGER. Then we can accept the figures of 1,479,259 as the total Army?

Gen. McCAIN. Yes, sir.

Mr. SHALLENBERGER. And 125,980 as the total number of officers?

Gen. McCAIN. Yes, sir. I got a corrected sheet from the Quartermaster's Department yesterday, in which they gave their number as 102,206 instead of 140,000, and the Ordnance Department has gained since my report—they have 27,466 instead of 20,000. The Signal Corps proper has 23,545; the Aviation Section, 90,114; and the Medical Department, 84,700. That makes a total in the staff departments of 328,031. The Engineers are included as a part of the line. I do not put them in the staff.

Mr. KAHN. That is under the law of June 3, 1916?

Gen. McCAIN. Yes, sir; the national-defense act of June 3, 1916.

Mr. SHALLENBERGER. The figures you gave yesterday of the actual number of Engineers was 119,000?

Gen. McCAIN. That is 111,279.

The CHAIRMAN. Are there any other corrections?

Gen. McCAIN. You wanted me to fill in your fifth question yesterday on this blank, the number of officers in each arm of the service?

The CHAIRMAN. Yes, sir.

Gen. McCAIN. I have that. As to the officers in the Regular Army we have Infantry, 3,616; Cavalry, 1,488; Field Artillery, 960; Coast Artillery, 1,388; and total, 7,452. National Guard, Infantry, 9,355; Cavalry, none; Field Artillery, 3,761; Coast Artillery, 687; and total, 13,803. Reserve Corps, Infantry, 27,163; Cavalry, 2,028; Field Artillery, 8,412; Coast Artillery, 2,114; and total, 39,717. National Army, Infantry, 1,871; Cavalry, none; Field Artillery, 668; Coast Artillery, 340; and total, 2,879. That makes the total, Infantry, 42,005; Cavalry, 3,516; Field Artillery, 13,801; Coast Artillery, 4,529; and the grand total, 63,851.

Mr. SHALLENBERGER. They are all line officers?

Gen. McCAIN. Yes, sir.

The CHAIRMAN. I want to ask you, General, what you think of the practicability of a bill which has been called to our attention requiring the War Department to notify the parents of the sickness of men in the hospitals?

Gen. McCAIN. I am looking up that very question. I do not know of any reason why that could not be done. It does not require any act of Congress.

The CHAIRMAN. It can be done without an act of Congress?

Gen. McCAIN. Yes, sir.

Mr. KAHN. By regulation?

Gen. McCAIN. Yes, sir. It will be easy for the doctor at the hospital to have a card or telegram, if it is urgent, and send it. We have never done that, but in the matter of casualties in this war my office is prepared to tell all about that—casualties, missing, deaths, and wounded. We are prepared to do that. We are going to require

the doctors in the hospitals to keep the parents of those entitled to be informed as to the progress of the treatment in the hospital.

Mr. ANTHONY. You would not recommend that that be done except in serious cases—that is, that the parents be notified of a soldier going to a hospital.

Gen. McCAIN. You can readily see that you might cause unnecessary worry, because if the parents got a notice they would jump immediately to the conclusion that their son was dangerously ill. That would be bad.

Mr. TILSON. You might require it to be done unless, in the opinion of the physician in charge, it was thought unnecessary, something to that effect; put the responsibility up to the doctor himself, and if he abused his discretion very rankly, or was mistaken in his judgment, he could be called to account?

Gen. McCAIN. Yes, sir.

The CHAIRMAN. You do not think it requires any legislation?

Gen. McCAIN. No, sir: I am trying to ascertain the best way to do it.

Mr. KAHN. General, is the department contemplating asking for any additional draft legislation?

Gen. McCAIN. I have not handled that, Mr. Kahn, and I do not know. From what I hear I think Gen. Crowder is handling that end.

Mr. KAHN. I know, of course, that he would draw up the necessary legislation.

Gen. McCAIN. In what respect?

Mr. KAHN. I wanted to know whether you had formed an estimate or an opinion of how many more million men would be required, assuming that this war was to last one, two, and three years, if you could give us an estimate of how many men we would require on that basis?

Gen. McCAIN. The Secretary is really the only one who would have any authority to speak. I have always had my own personal opinion.

Mr. KAHN. I wanted to get your opinion.

Gen. McCAIN. I do not know how far that would conflict with the ideas of the Secretary.

Mr. KAHN. I had figured out that you have in the fighting force, according to the figures you gave us, 1,039,949 men under arms. That is eliminating the various corps and also the Engineers who are not fighting troops.

Mr. LUNN. Did not the chairman make the statement that on September 1, 1917, the fighting force amounted to 1,073,000, or was that the Army and Navy?

The CHAIRMAN. The Navy and Army on September 5. That included the enlisted men in both the Navy and Army and Marine Corps, a little over a million men.

Mr. MORIN. Assuming that we will have to have 5,000,000 men over there, at least 5,000,000 men, and that we should get them as quickly as possible, how many do you think it would be possible for us to get ready each year?

Gen. McCAIN. I am not really able to say. We are making headway all the time. Everything is growing. If we can get the ships, we can get the men after this year.

Mr. MORIN. Assuming that we could get the ships, how many men could we get ready: what would be the maximum each year after the first year?

Gen. McCAIN. I do not see any reason, if we could get the ships, why we can not send over 3,000,000 men.

Mr. MORIN. And give them sufficient training in this country?

Gen. McCAIN. Yes, sir.

Mr. MORIN. If we have to have 5,000,000 men and get sufficient ships, we could have the 5,000,000 men over there in two and one-half years?

Gen. McCAIN. Easily, as far as getting the men is concerned, after we get the ammunition. I do not know just what the Ordnance Department is going to be able to do after they get all the plants running.

Mr. MORIN. And equip them and supply them?

Gen. McCAIN. I do not know what the Quartermaster's Department and the Ordnance Department can do. Outside of that, there is no limit, so far as I can see, in getting them ready.

Mr. MORIN. You could not equip that many in a year?

Gen. McCAIN. Not unless we expanded enormously from what we have done. We would have to start a great many plants all over the country.

Mr. MORIN. Then, it is safe to assume that it would take us at least three years to get 5,000,000 men over there, trained and equipped?

Gen. McCAIN. I think we can do it before that, if we are willing to take a chance here and there, willing to go in without fear of making a mistake.

Mr. GORDON. How much training do you figure on giving those men?

Gen. McCAIN. They ought to have at least three months in this country. They ought to have more, but when an emergency presents itself, if that is the only thing, we would not stop for three months or any other particular time.

Mr. GORDON. You consider some training absolutely vital, do you not?

Gen. McCAIN. Yes, sir.

Mr. GORDON. Just how much and how long?

Gen. McCAIN. I put three months on that.

Mr. GORDON. That would be the minimum amount of training that you think the men should have before being sent over?

Gen. McCAIN. Yes, sir.

Mr. GORDON. Have not a great many men been sent over who have not had that much training?

Gen. McCAIN. Well, I do not know. I do not know of any that have been sent, except some individual drafted men.

Mr. KAHN. There were some men from Camp Lewis who went over who had not been in three months, and one of them was the brother-in-law of a Member of this House.

Gen. McCAIN. Individuals going into an organization need less time in a trained organization. We would not keep the whole organization back because they had not had three months' training.

Mr. KAHN. These men were taken from the brigade depots to fill up units in the Regular Army and the National Guard.

Mr. ANTHONY. In view of the fact that the Chief of Staff of the Army a little less than two years ago stated that he would consider it unsafe to send any man on the battle line unless he had two years' training, the military opinion has undergone a rapid change as to the necessity of a long period of training?

Gen. McCAIN. It does not, to my mind. I think those things are adjusted by necessity. I do not think that you can make a soldier in three months or six months or a year.

Mr. ANTHONY. But it does not take two years?

Gen. McCAIN. I think it takes two years.

Mr. ANTHONY. You really think that?

Gen. McCAIN. Yes, sir; to make the best soldier.

Mr. ANTHONY. Is it not a fact that 80 per cent of the men who are doing the fighting on the battle line have not received that much training?

Gen. McCAIN. That does not mean that they should not have it.

Mr. GREENE. We are not sending unfit men?

Gen. McCAIN. I would not say that.

Mr. GARRETT. They would be more fit if they had more training?

Gen. McCAIN. Yes, sir. It is a relative term.

Mr. QUIN. I know that some young men from my county—Pike County, Mo.—enlisted along last May in a regular organization and were immediately sent to France. I judge that to be true from censored cards which they sent back and which were published in the local newspapers. They were boys that I know personally. I take it for granted that they could be trained over there?

Gen. McCAIN. Yes, sir. They are getting the very best training over there. You must not lose sight of that. They are training in an atmosphere of war.

Mr. MORIN. How much training are they getting over there before being put into the line?

Gen. McCAIN. I do not know just exactly the number of months, but they are still being trained. They are going to school and doing all sorts of things.

Mr. MORIN. They probably get at least three months' training?

Gen. McCAIN. Yes, sir; very many get more than three months' training.

Mr. MEKENZIE. Who do you know, if anything, about the scrutiny that is exercised by the War Department in the commissioning of men of the Staff Corps? My reason for asking that question is that every few days I pick up one of the Washington papers and see that So and So of the Arlington Hotel or So and So of the Harrington Hotel or So and So of the Patent Office has been commissioned in the Signal Corps or the Sanitary Division or in the Ordnance Department or somewhere else. Are those men given an examination or how do they proceed to get commissions?

Gen. McCAIN. The staff bureau convenes a board of officers and they examine them physically and mentally. It is determined in the regular way by boards of officers who are supposed to be competent. Then it comes up to the staff bureau and the chief reviews it and passes on it, and if it is all regular it comes to my office, having been approved by the Secretary of War, and we issue the commission.

Mr. SHALLENBERGER. Can you give us the number of officers that have been commissioned from civil life in the Army without going through the training camps, and the rank they hold?

Gen. McCAIN. I will try to.

Mr. SHALLENBERGER. I am told that over in Europe where the men have actually seen trench life, have been in actual battle, that they wear certain chevrons so that the public knows. What would you think of the proposition of having some distinguishing mark like a broad band on the sleeve or something of that kind for all the men who have seen service in Europe, compared to those who never get there?

Gen. McCAIN. We will have something like that. We are getting up a distinctive mark for people who have done distinctive service. Then we will have a campaign badge just as we have had for all the wars heretofore.

Mr. ANTHONY. Would you confine it to men who have seen service in the present war or to men who saw service in the Spanish War?

Gen. McCAIN. We would give him a campaign badge just like this [indicating] for each war.

Mr. GREENE. What are you going to do with a man who enlists with good faith, but who, on account of possessing certain talents or resources, is assigned to and performs some military service that does not take him into the field of action; a service that is essential, of course, to the operation of the Army, just exactly as your own service? Take your own case, as an example; you are not liable to be ordered into the field of action at all under existing circumstances, at least, because you are more valuable to the organization and the furtherance of the operations right where you are; yet should there be any distinction in the character of the uniform to indicate that you have been performing a service not as heroic, perhaps, as another man?

Gen. McCAIN. I think those of us who remain in Washington feel that very keenly. We are simply unfortunate, but we have to have somebody to do that.

Mr. GREENE. But should your uniform undertake to differentiate?

Gen. McCAIN. I think it is all right to take the men who share the dangers of the fight and have something to show it. That is a part of my misfortune.

Mr. GREENE. Not after the service is performed, but while it is in progress, would it not be a bad proposition to make a distinction between men as to whether they have been at the front, or whether they have performed equally as important service at home?

Gen. McCAIN. I would not put anything on the uniform right now to show that they have been over there.

Mr. GORDON. Do you not distinguish between services such, for example, as you yourself are rendering, and the services rendered by a lot of fellows who have commissions that are performing purely civilian employment? Do you not distinguish between one of the most important positions in the Army, to wit, The Adjutant General, and the hundreds and thousands of men who are filling these purely clerical positions?

Gen. McCAIN. As a matter of fact, I do not make a great deal of distinction. We do not keep the men here unless it is necessary.

Sometimes, no doubt, people may stay here a little longer than they should, but we are trying to put them where they can do the best service for the Government. There are some officers in my office who are just as indispensable in that office as they are on the battle front. We could not get along without them. Those men feel it. They want to go, all of them. We have to keep somebody. Naturally, you will accumulate a lot of officers in Washington. They come to visit here on their way to the front, and you see more of them than are really stationed here.

Mr. GORDON. There can not be any question about that. Anyone who has knowledge of our tremendously large military department knows that that work is vitally essential, and I do not think that any good citizen would criticize if he knew the facts. It is up to you gentlemen to determine who has the necessary technical knowledge and experience to perform those duties. To what extent have the different bureaus considered the proposition of putting men who are out of the draft age in these clerical positions?

Gen. McCAIN. They are doing that all the time. That is the rule, as far as possible. They can not always do it. I want to say for the officers, all of them, from the lowest to the highest, that I do not believe I have found one that did not want to go to the front. They are all after it. It is hard to keep them here. They feel that they have not been justly treated when they are sent here. Take the field clerks, they all want to go over there. It is a hard matter to get any field clerks for the commands in this country.

Mr. GORDON. What is the real function of a field clerk?

Gen. McCAIN. He keeps the records and the correspondence. He bears the same relation to the division or Army headquarters in the field that the clerks in my office bear to me here in Washington, only they have to go outside. They are attached to the commands.

Mr. GORDON. It is not a very hazardous position?

Gen. McCAIN. No.

Mr. GORDON. There has been a very great demand for those positions?

Gen. McCAIN. Yes, sir. We appoint them only as vacancies occur and only as Gen. Pershing asks for them. We have had a great many applications, but we appoint them only as vacancies occur, and they must be stenographers and typewriters.

Mr. FIELDS. How many field clerks have you in the service at this time?

Gen. McCAIN. We have in round numbers 1,600.

Mr. QUIN. Do you not think that it is a little gally on the part of these field clerks to be asking to be commissioned? There is a bill pending before this committee.

Gen. McCAIN. I would not recommend that. In my view, I think it would be objectionable.

Mr. QUIN. I thoroughly agree with you. There is a bill before Congress, and I have received a lot of letters from them.

Gen. McCAIN. I have made a recommendation against it.

Mr. ANTHONY. I regard your judgment as very sound along lines of military policy. Do you not think it is the wrong military idea to commission young men of draft age for the nonmilitary duties that Mr. Gordon has just spoken about in this country? We are

conducting quartermaster schools for young men of draft age and taking them for quartermaster jobs all over the country, and we have a vast reservoir of middle-aged men, above the draft age, who could perform those duties, perhaps even better than those young men, and which would release a large number of active men for the line of the Army. I understand that in England and other European countries they have just the opposite military policy from ours, they utilize the middle-aged men for those nonmilitary positions. Do you not think it would be a good plan if we adopted such a policy?

Gen. McCain. Yes, sir; as a matter of fact, we do that.

Mr. Anthony. You have not been doing it?

Gen. McCain. Not always. It has not been done as thoroughly as some of us would like.

Mr. Anthony. Is it possible for a man 40 years of age to secure an appointment to one of these quartermaster schools, where they are training the quartermaster officers?

Gen. McCain. Yes, sir; for a long time, as soon as an application like that came to my office, within the draft age, it was automatically returned to him with the suggestion that he must hunt somebody outside of the draft age for the position. If they must have the man who is within the draft age, he must make a certificate that the man possesses certain qualifications that he can not readily get out of the draft age.

Mr. Anthony. Is it true that the quartermaster schools are composed of a great percentage of men who are within the draft age?

Gen. McCain. There are a great many.

Mr. Anthony. They are taken from the enlisted men, largely?

Gen. McCain. Yes, sir; by the division commanders, a great many.

Mr. Kahn. As I understand, these men, who have gone to Camp Johnston and to Jacksonville, are, for the most part, drafted men who were selected by their commanding officers as having the necessary qualifications for service in the Quartermaster Corps. Is not that your understanding?

Gen. McCain. Yes, sir; they get them from the enlisted men through the division commanders.

Mr. Kahn. After all, the men in that corps are largely enlisted men or drafted men who have been recommended by their officers?

Gen. McCain. Yes, sir.

Mr. McKenzie. There are a number of young men who have volunteered for that specific unit, as I understand. There were two of them in my office a short time ago—one of them from the county seat of my home county. They said that they had volunteered for that service. They were ordered to this camp at Jacksonville, and then it was found that they did not have accommodations and they were sent to the American University camp. I am sure that they were volunteers.

Mr. Garrett. It occurs to me that inasmuch as the men between the ages of 21 and 31 are to fight the battles in this war, why would it not be just and proper and right that these men should fill all of the positions they are competent to fill in any department, regardless of whether or not they are trying to stay out of the trenches or trying to get into the trenches?

Gen. McCAIN. That is what we have done. We have opened up the commissions widely to all enlisted men, not to those within the draft age, but to those from 21 to 40 years of age.

Mr. KAHN. Is it not a mistaken idea that the man in the Quartermaster Corps, in modern warfare, has a snap? Does he not come under fire as much as the man in the trenches, with no weapon to defend himself?

Gen. McCAIN. I think the position of an officer is so important that we should not allow the fact of his occupation or his age or anything to interfere with selecting the right man for the right place. An officer has to be physically sound, he has to work all day and he has to plan at night. He has to take care of his men at night, and he has all sorts of things to do. It requires an unusual man, and when you get those men you should make them officers.

Mr. KAHN. I am speaking as much for the enlisted men of the Quartermaster Corps as for the officers. My understanding is that the men in the Quartermaster Corps are compelled to go right up to the first line of trenches with ammunition, and with food and supplies of all kinds and that they are directly under fire?

Gen. McCAIN. In the field they would be.

Mr. HULL. What percentage, General, of the Quartermaster Corps are under fire in France to-day?

Gen. McCAIN. I can not tell you.

Mr. HULL. You could give us an idea, a very small percentage?

Gen. McCAIN. Of those in the Quartermaster Corps?

Mr. HULL. Yes, sir.

Gen. McCAIN. It would be a small proportion. It would be handled by the regimental supply officers, those belonging to the organization proper.

Mr. HULL. What do you think of registering the men between the ages of 31 and 40?

Gen. McCAIN. I see no objection to it. I do not think that it is highly important at this time.

Mr. HULL. There is a large number of men, of course, not the same proportion, but a large number that we might find.

Gen. McCAIN. We have given them a chance to volunteer. We are enlisting them every day.

Mr. HULL. There is a large number who have not volunteered?

Gen. McCAIN. Yes, sir. We are enlisting those every day. In the present stage of the war, I do not see any necessity for registering those above that age.

Mr. HULL. What is the age limit for a man to seek a commission in the Quartermaster Corps and the Ordnance Department?

Gen. McCAIN. There is no age limit fixed by law.

Mr. HULL. What is the regulation?

Gen. McCAIN. They have not actually published any regulations. They have not taken anybody, generally speaking, over 50 years of age, unless it was an unusual case.

Mr. HULL. What is the proportion of the enlisted men to the entire strength of the Army, about?

Gen. McCAIN. You have in round numbers 1,500,000 enlisted men, and you have in round numbers 125,000 officers.

Mr. HULL. Does that include the Hospital Corps?

Gen. McCAIN. Yes, sir. One hundred and twenty-five thousand officers in round numbers.

Mr. HULL. What is the proportion of actual enlisted men of the fighting line to all others?

Gen. McCAIN. We have 125,000 officers and we have in the line of the Army to-day 1,151,228 men.

Mr. HULL. That is a loss of about 33½ per cent?

Gen. McCAIN. The easiest way to get at the figures of the requirement is about 1 officer to 22 or 23 enlisted men.

Mr. HULL. There is another proportion that I am trying to ascertain, and that is the actual fighting strength of the Army.

Gen. McCAIN. We have it right now.

Mr. HULL. What is the actual capacity of the cantonments at this time for enlisted men?

Gen. McCAIN. I can not tell you. It is between 500,000 and 600,000.

Mr. HULL. Could you ascertain and put that in the record?

Mr. GORDON. Including the National Guard?

Gen. McCAIN. Yes, sir.

Mr. HULL. That is, the actual maximum capacity for enlisted men of the 16 cantonments.

Mr. ANTHONY. May I supplement that? Will the National Guard cantonments be suitable also for training men after the guard has left?

Gen. McCAIN. They are only tents, and are not as suitable, but they are all right.

Mr. ANTHONY. They have a good many wooden structures?

Gen. McCAIN. Yes, sir; we could use them.

Mr. KAHN. Who designated the various camp sites?

Gen. McCAIN. That was done by the department commanders in compliance with a study which was made by the War College.

Mr. KAHN. The War College officers went over the ground personally?

Gen. McCAIN. They went over what facilities, what qualifications, what features a good camp site should possess, and in accordance with that, they sent to the commanding generals copies of that study and directed them to make their locations as far as practicable so they would possess those features.

Mr. KAHN. Can you put into the record the names of the various camp sites and cantonment sites and also give the names of the commanding officer who recommended each site?

Gen. McCAIN. Yes, sir.

Mr. ANTHONY. In connection with that, General, could you give us the recommendations of the boards of officers in the various departments that recommended these camp sites? I understand that there were boards of officers appointed by the commanding generals.

Gen. McCAIN. Yes, sir.

Mr. ANTHONY. And they made certain recommendations to the commanding generals, and in some instances, these recommendations were followed and in other instances the commanding general went over them and selected other sites. Is that true?

Gen. McCAIN. I do not recall right now whether that is absolutely true or not where a definite recommendation was made by a board. It may have been done.

Mr. ANTHONY. Could you put in the record the names of the officers who recommended the camp sites at Funston and Doniphan?

Gen. McCAIN. Yes, sir.

Mr. ANTHONY. We want to fix the responsibility for the location of the cantonment at Funston in that flat river valley, when there were so many other locations in the vicinity on the same reservation which were superior from a sanitary and military standpoint.

Gen. McCAIN. Yes, sir.

Mr. ANTHONY. Also, can you tell us whether there was any instance where the commanding general or the War Department itself changed the recommendation of the board after it was received?

Gen. McCAIN. Yes, sir.

Mr. HULL. You spoke of target practice taking a great deal of time. Up to recent times the Army has not thought it was necessary to have much target practice, has it?

Gen. McCAIN. Oh, I think so. We have always devoted a great deal of attention to target practice.

Mr. HULL. You have?

Gen. McCAIN. Yes, sir; a great deal of attention.

Mr. HULL. That is diametrically opposed to what I have understood from some officers.

Mr. KAHN. As a matter of fact, the law gives additional pay for three grades of expert riflemen?

Gen. McCAIN. Yes, sir; we pay a great deal of attention to target practice.

Mr. KAHN. And the law provides extra pay for artillerymen for becoming experts?

Gen. McCAIN. Yes, sir.

Mr. SHALLENBERGER. I notice in this story about the boat which was sunk yesterday that there were so many casual officers. Those are officers attached to no command, not assigned to any particular command?

Gen. McCAIN. They speak of the man who is in command of the casuals on the ship. An officer who comes to a military post is a casual at the post. In most of the cases he will be a man in command of the casual enlisted men. They always put them under some officer. The enlisted men who have no organization on ship board they get them all together and put them under a casual officer.

Mr. SHALLENBERGER. I have been informed that you have in the different commands of the country a lot of officers who are not assigned to the different commands and they are more or less in charge of the recruits who are to be sent to the different places where needed?

Gen. McCAIN. We call those unassigned.

Mr. SHALLENBERGER. What I wanted to know is can you tell us how many of those there are in the Army at present?

Gen. McCAIN. I will try to do that.

Mr. SHALLENBERGER. Now, I want to ask you in reference to the matter of the young officers, who are assigned to the noncombatant corps.

I want to ask you if it is not true that an army needs a tremendous surplusage of officers when they fight, because military experience has proven now that the officers are killed more rapidly in proportion to their numbers than the men. I am referring now to the officers who take the men into battle.

When this war started, an old German farmer who lived in my community told me what was going to happen. He predicted the victories of the German army, because they had a tremendous surplusage of trained young officers. He said that when the men went into the war and went into battle the captains and the lieutenants are the men who take the men into battle, and when those officers are killed off you have got to have other men to put right in their places, and he said that Germany had five times as many of those trained officers in reserve as England, and that England only had fifteen or twenty thousand. At the beginning they were killed off almost more rapidly than they could be trained, and Germany had them already trained and in reserve, and that was one of the reasons for the German victories. That was the prediction and the explanation given by this old German farmer.

If we do not train these young officers to take the places of the men who are going to be killed when our men go into battle we are liable to make the same mistake as England and the other nations did. Do you not think we ought to train more young officers for the fighting front than for anything else?

Gen. McCAIN. We are doing that.

Mr. SHALLENBERGER. It is a matter of record before this committee that when you had the first training camps you trained those young officers, apparently for that kind of work. We were told that after the line of officers who conducted these camps had picked out the men they wanted, they turned the balance of the men over to the Quartermaster's Department or to the other staff corps, and that the staff corps did get a large number of young officers from those camps.

As I understand it, you now have a plan to bring those men largely from the ranks, and to put them in as Mr. Kahn had indicated. But it is a fact, is it not, that in the beginning a great many of the young officers trained in these camps were trained for the staff corps and put into the staff corps?

Gen. McCAIN. Yes; that is true. We asked them to go into the camps and send people there and select the men they wanted, and we helped them to do it, and they got officers who were specially qualified for those duties.

Mr. SHALLENBERGER. Do you think the men trained in these camps should be trained for the positions of combatant officers, and then if they are found incompetent for that duty they should be sent into the ranks, rather than be put into the noncombatant corps?

Gen. McCAIN. I think there is a misapprehension about that, and I would like to clear it up as far as I can.

The men who went to the staff corps were not failures. They left the training camps before graduation, and they were found to be specially qualified for the staff departments, and the staff departments wanted them, and they were released from the training camps in order to let them go to the staff departments.

Now, in reference to the second training camp, a large number of men were passed on as unfitted for line duties, but they were fitted for the staff corps, and some of them went to the Quartermaster's Department, some of them to the Ordnance Department and some of them to the other staff departments. We got a report in regard to

those men, and we sent the list of the men to the various staff departments, in the order in which they were recommended, and it was left entirely to the head of the bureau to find out whether he would recommend them or not. I want to get rid of the impression that the men who went to the staff departments were failures. They were not failures by any means.

Mr. SHALLENBERGER. Was the first officers' training camp held before the draft was called?

Gen. McCAIN. Yes; we had those men graduated and at the camps before the first men of the draft reported there. We had them there ready to receive these men.

Mr. SHALLENBERGER. You have taken into consideration, then, in the training of these officers the fact that you need a great reservoir of trained combatant officers of the company and regimental ranks to supply vacancies created when casualties occur when you go into battle?

Gen. McCAIN. Yes, sir.

Mr. SHALLENBERGER. You think you have a proper proportion of officers for that purpose? You recognize the fact that it has been discovered in the armies that are fighting in this war that the casualties are very severe among the young officers?

Gen. McCAIN. It is absolutely essential to have a reservoir of officers. I made the statement a while ago that I thought we needed three times as many officers as were necessary to actually man the organizations, so that you would have two officers in reserve for every one in action.

Mr. SHALLENBERGER. You are preparing to have these reserve officers combatant officers and not to have a great number of those men in the staff corps among the young officers?

Gen. McCAIN. We do not need these training-camp officers now, and we are going to graduate them in three months. The chances are that not one of them will get a commission on his graduation, because the organizations are filled now with officers. But we put them on an eligible list. They are in that reservoir of trained officers where we can draw from them, and we are going to add to it until we get a reservoir that we think will answer all the purposes they will be needed for. And it is going to be done without costing the Government anything extra. We are taking the enlisted men. That has a double advantage. It has the advantage of economy, and it gives the drafted man or the man who volunteers a chance to get a commission. So that a man from the outside can not get a commission unless he goes into the enlisted ranks.

Mr. SHALLENBERGER. I went to three different departments after war was declared, asking for the commissioning of some men who had spoken to me, and I was informed that no one was being taken into the Army and being given a commission without having had military experience. I thought that was the rule, but that has been broken?

Gen. McCAIN. In the staff bureaus?

Mr. SHALLENBERGER. Yes.

Gen. McCAIN. Yes; I think it has been broken in many cases.

Mr. SHALLENBERGER. At the beginning was that the rule?

Gen. McCAIN. I do not think they made any rule on that point. Take, for instance, my own department. Before taking a man in

as an adjutant general, I much prefer him if he has had some experience in that line, but I do not keep him out simply for the reason that he has not had that experience, and if I found a man whom I considered was the man I wanted, I recommended him for a commission.

Mr. SHALLENBERGER. I saw some newspaper correspondence from some fellows of that capacity, who were afterwards commissioned as majors, and I thought the rule must have been broken.

Gen. McCAIN. I do not know that there was any such rule. I have no doubt they thought it would be best if they had some one with experience.

Mr. HULL. Does the department in any way look after these men after they are in the service? Does it look after the efficiency of the men in the staff corps, and pay attention to the incompetent men?

Gen. McCAIN. I do not understand just what you mean.

Mr. HULL. Do they watch the efficiency of these men? Do they watch to see if they come up to the standard of an officer, in the different departments in Washington? Do you try to drop them out if they lack efficiency?

Gen. McCAIN. We are dropping them out every day, and we are getting many protests from every source in regard to that.

Mr. GREENE. Is it not true that notwithstanding some of these staff corps are technical, and are described as noncombatant corps, the service their officers perform takes them into the zones of action, so that they must be in good physical condition and able to withstand the hardships they have to endure, which are imposed upon them, and which are in many cases as arduous as the hardships imposed upon the men in the trenches or in the line?

Gen. McCAIN. Absolutely.

Mr. GREENE. So that the proposition of getting older men who may be able to perform administrative or clerical duties, and putting them into these organizations may not be so practical, inasmuch as there are many men in those organizations who may, after some service in this country, be transported right to the front, and given duties connected with transports, or munition trains, or any other duty connected with their department in the field of action itself?

Gen. McCAIN. Yes, sir. We tell them that. A great many of them say they want to go to the staff departments, and that their deficiencies will not affect them there. We tell them they take exactly the same physical examinations throughout the army, whether they are in the line or the staff, and no one knows when anybody is going to be called into the field and may have to suffer the hardships of the field, and any physical defects that will prevent a man from doing that when he is called would disqualify him.

Mr. GREENE. Are you prepared to give now, or if you are not, will you put into the record, an itemized statement that will show, first, the number of so-called provisional officers, who have been commissioned in the service since that act took effect, also how many men you have now who have been candidates for provisional commissions, and have been accepted and are on the so-called eligible list, awaiting their turn to be commissioned?

Gen. McCAIN. I can give you a part of that information now, and I will complete it in the record.

We have from the first training camp and the first examination 1,162 names on an eligible list; and from the second training camp we have 1,000 names. We have got on the eligible list for provisional second lieutenants, in round numbers, 2,162. We have vacancies at the present time on that list amounting to 127. We will have, as soon as this class graduates out at Fort Leavenworth about the 25th of this month, something like 255 vacancies on that list.

Mr. GREENE. That includes the 127?

Gen. MCCAIN. That includes the 127. That leaves about 1,800 eligibles for appointments as provisional second lieutenants, for whom there are at the present time no vacancies in the Regular Army.

Mr. GREENE. What is the policy of the department as to the extent of the period of eligibility at the present time?

Gen. MCCAIN. We are going to keep them right along. We have not put any limit on that, at the present time.

Mr. GREENE. Would you be disposed, when you examine the question again, to put into the record, in such language as you care to use, a general summary of the policy of the department toward the incorporatiton of these eligibles into the service? That may suggest some general answer to you, so that we may have a compact story from which we may get the information, a general story of what you are doing with them, or what you intend to do with them.

Gen. MCCAIN. You wanted to know how many were dropped out, I believe?

Mr. GREENE. No, I did not ask you for that; but if you have the information, it can be put into the general story. You mean eliminated after observation?

Gen. MCCAIN. Yes; we have of cavalry officers 5, of field artillery officers 2, of coast artillery officers 5, and of infantry officers 13, making a total of 25.

Mr. GREENE. That is, of those who were formerly on the list of eligibles?

Gen. MCCAIN. Formerly provisional second lieutenants, and who are, for one cause or another, gone.

Mr. GREENE. Have you any list of those who, having been on the list since last summer, have been eliminated before they got their provisional commissions?

Gen. MCCAIN. No, I have not got that list here.

Mr. FIELDS. General, when the American Army goes into battle, what position do the officers take? Do they lead?

Gen. MCCAIN. It depends on the occasion. The officer's place is in front, except when he goes to what we might call a forlorn hope. His post is where he can best direct the operations of his troops.

Mr. FIELDS. Is the same true of the English and the French armies?

Gen. MCCAIN. So far as I know, it is.

Mr. FIELDS. What about the German army in that respect? I have read that the German officers never lead, that they always send their men ahead.

Gen. MCCAIN. We see all sorts of reports of that kind, but I think it is safe to assume they are doing it in the most efficient way.

Mr. KAHN. Do you know anything about the German tactics, at all?

Gen. McCain. No, sir.

Mr. KAHN. What challenged my attention to that was that Gov. Shallenberger suggested that their officers lead their men. I knew that the English officers lead their men, and I assume the American officers are going to follow those tactics. But my reading shows that the German officers are behind the men.

Mr. SHALLENBERGER. I did not mean to indicate that in particular, but I was referring to the general fact that the commanding officers of companies, captains and lieutenants, those who command the important fighting units are the officers who are killed off most rapidly, and whose places must be filled. As a general proposition, when they go into battle, these young officers are killed off very rapidly, and I have heard it said many times that that was the greatest drawback of the English army early in the war, because they did not have a sufficient number of young officers to take the place of those who were killed in battle.

Gen. McCain. It is difficult to keep an officer from exposing himself.

Mr. HULL. Is it not true that under the conditions of modern warfare there is no special zone of safety, and that the men who are furthest forward may be in the safest position?

Gen. McCain. In the trench; they are all right in there together.

Mr. FIELDS. I was talking about their position.

Gen. McCain. Their position is going to be determined——

Mr. FIELDS. (interposing). By the circumstances by which they are confronted?

Gen. McCain. Yes.

Mr. GREENE. Is it not true that in figuring the casualties among officers and enlisted men that you must not lose sight of the basis of calculation? For instance, in a modern Infantry company there are 250 enlisted men and 2 captains, and if the captains are killed, that makes a percentage of loss 100, whereas, if 2 enlisted men are killed, the percentage of enlisted men killed is a very small proportion.

Mr. ANTHONY. General, what have you done, or what do you contemplate doing in regard to raising troops in Porto Rico?

Gen. McCain. We are going to raise a division of 12,000 men there.

Mr. ANTHONY. Will you raise such a division under the draft?

Gen. McCain. Yes.

Mr. ANTHONY. And that is contemplated to be done in the immediate future?

Gen. McCain. Yes.

Mr. ANTHONY. Now, as I understand it, an officers' training camp has just been completed there?

Gen. McCain. Yes.

Mr. ANTHONY. And I understand that Col. Townsend has succeeded in turning out some very competent Porto Rican officers. Is the department satisfied that they have the right material among the natives for good officers?

Gen. McCain. Yes.

Mr. ANTHONY. You are going to raise one division of troops there?

Gen. McCain. Yes, something over 12,000. It will have a general officer as its commander.

Mr. ANTHONY. Are those troops destined for service on this side or on the other side?

Gen. McCAIN. I do not think that has been determined. We will use them wherever it seems best to use them.

Mr. ANTHONY. They will be trained on the Island of Porto Rico?

Gen. McCAIN. Yes.

Mr. ANTHONY. And the company officers will be largely natives?

Gen. McCAIN. They will be taken from the people down there.

Mr. ANTHONY. Of course, the English language will be used in the instruction of the men?

Gen. McCAIN. Yes.

Mr. ANTHONY. That is now the language in the Regular Porto Rican Regiment, for commands?

Gen. McCAIN. Yes.

Mr. QUIN. I would like to know how many men there are in a division.

Gen. McCAIN. The number varies. I think the Germans at the present time have from 12,000 to 15,000 in a division. Our regiment has about 3,600 men. There are two regiments to a brigade, and two brigades to a division, and then in addition to that you have got to put in the auxiliary troops. If you have a division at its full strength, with all the men in it that will be needed under any circumstances, it will have, in our service, about 27,000 men. But you will hardly ever find a division that large.

Mr. QUIN. That is the size of the American division now?

Gen. McCAIN. Yes; if you get everybody in there who belongs to the division, you will probably have 27,000 men.

Mr. CRAGO. The company in this warfare is the real fighting unit. It has been found so, and that is one reason they make it so large. In the company there is reflected, in different forms, every branch of the administration of the army, with the captain at the head of it, and when a commanding officer makes any corrective criticism, it goes down as far as the captain, and when anybody, from the lowest private up to the captain makes a kick, it is directed at the captain.

But it has been the policy, seemingly, of the department, in order to find the right kind of men for clerical positions, to ruthlessly go to these companies and take these men, where most of the men are from the same town, and where a captain had picked out men that he knew for these positions, and had made his company efficient by reason of having a good cook, or by reason of having good mechanics, and perhaps he had some fellow in a position like that who had some knowledge of engineering acting as an executive officer.

The captain had made the unit efficient, and we want to keep it efficient, but in spite of that these men have been robbed in many instances of the very men they had picked for their particular unit, to make it efficient.

Is it not possible by asking for volunteers, or going out into civil life, or going into the draft to get men for these places, instead of taking them out as they have been taken, and breaking up the efficiency of these companies?

Gen. McCAIN. That has received our very serious consideration. We have got now, as we have never had before, a line on the enlisted men of the army that is very helpful. We know what they can all

do, or at least if we have not that information about all of them, we will have it within the next 10 days or two weeks. We try to put a man in the position for which he is best fitted.

If the staff departments want a certain number of men with certain qualifications, they make a requisition on The Adjutant General, and we send it to the division commanders, assigning a certain quota to each one, and tell him to furnish so many men possessing the qualifications desired, for this purpose.

In that way the organization commanders are able to protect their organizations. They will not take everybody out of a battalion or a company or a regiment who possesses those qualifications. They will leave somebody there for the purposes of the organization itself.

Mr. CRAGO. Should not that be the paramount consideration, because the company is the real fighting unit?

Gen. McCAIN. That is true, but it is a fact that you have to get men for the technical corps that possess certain qualifications.

Mr. CRAGO. But you are taking them from these organizations that have already been organized, and which are properly balanced. You are taking men away from the company who expected to serve with their comrades, and you are separating them as widely as though they came from opposite sides of the continent, instead of from the town where the company was organized, and you have rendered that company inefficient, in spite of the fact that you have the whole body of citizenship to draw from, or you have the draft forces to draw from.

Gen. McCAIN. We know it hurts the organization, and we are trying to avoid that. We were never in a position to make those selections before. Now, with the information we have, which the Provost Marshal General gets from these people, if the engineers want men with certain qualifications, we can make requisition on the Provost Marshal General and he will induct into the service those men from the outside, and that avoids the necessity of putting them in an organization, and taking them out of an organization. The division commanders are watching that. They protest against breaking up organizations, and we know the importance of it, but sometimes it has not been possible to avoid it.

Mr. CRAGO. I think that is one of the worst things for the organization. I want to make a statement with reference to the Quartermaster's Department. I do not believe many members of the committee understand that the men in field service are usually in more danger than the average company officer. The only commissioned officer killed in the battle of Polo was Capt. Grayenbuhl of the Quartermaster's Department, and he was the only officer killed in the entire engagement of that day.

Mr. GORDON. The officers in the Quartermaster's Department have charge of carrying quartermaster's supplies and munitions to the front?

Gen. McCAIN. They do everything that a quartermaster would do. They have the transportation and munition supply companies.

Mr. GORDON. What proportion of the men already sent over, or about to be sent over, were in organizations, and what proportions were in detached units? What proportion of them are sent in organized military units?

Gen. McCain. Practically all of them. Some come back sick. We put them in a hospital and return them. Some of them for various causes could not accompany their organization when the organization left here, and we put them on the transport and let them join the same organization over there. In the case of recruits we put them on in a detachment and send them over. Some of them were not filled up when they went over, and we will have a stream of unassigned men going and coming all the time.

Mr. Gordon. I asked that question because there was a statement in one of the newspapers yesterday that at Camp Sherman there has been a call issued for 6,000 volunteers from that camp.

Gen. McCain. I saw that statement. I do not think there is anything in that. We would not ask for volunteers. We have got the men right there. It is not necessary to ask for volunteers. There is nothing to that.

Mr. Morin. Does not the law require that these boards which pass on the efficiency and disability of National Guard officers shall be composed of a majority of National Guard officers?

Gen. McCain. No; but the Secretary has directed that they be composed of a majority of National Guard officers.

Mr. Morin. Those officers who were discharged or who have been relieved from duty were all Regular Army officers?

Gen. McCain. As a matter of fact, I never notice that myself. Personally I regard it as unimportant. I think if they get officers who have a due sense of their responsibility—I would hate to think any of them would be prejudiced after they had been sworn in to do their duty.

Mr. Morin. I agree with you there.

Gen. McCain. I think the Regular Army officer would be less liable to be biased than anybody else. We get National Guard officers, and they all ought to be senior to the officer who is being passed on, but it is not always possible to do that. It is very objectionable to have a junior passing on a senior officer, when the action of the board may result in his elimination from the service.

Mr. Morin. There is a general impression that the law requires that.

Gen. McCain. No; the law does not require that.

Mr. Shallenberger. You were speaking a while ago about the location of the camps. I understood you to say that the division commander was the real authority who decided that matter?

Gen. McCain. The department commander. They did it under a general specification of what constituted a good camp site.

Mr. Shallenberger. Was that a Regular Army officer in every case?

Gen. McCain. Yes.

Mr. Shallenberger. Do you know the name of the department commander who was responsible for establishing the camp at Deming, N. Mex.? The Nebraska troops are located there.

Gen. McCain. That was done by the commanding general of the Southern Department. That officer has been changed several times.

Mr. Shallenberger. Where are the headquarters of the Southern Department located, at San Antonio?

Gen. McCain. At Fort Sam Houston, San Antonio, Tex.

Mr. SHALLENBERGER. Is that camp expected to be continued for the use of troops?

Gen. McCain. I think so.

Mr. SHALLENBERGER. I ask you that because the governor of Nebraska not long ago sent an emissary to investigate the conditions there. In his report he said:

The enlisted men have two grievances. First, keeping them there so long when they feel that they are fitted for service abroad. Second, the sand. I can not find words strong enough to condemn the location of any army camp in the country where the sand is so deep and so wide and sand storms so frequent and so severe. No matter how exaggerated a story about sand storms at Camp Cody may sound, you are warranted in believing them. When one of these storms strikes the camp—and they are very frequent—practically all the work must be suspended. Regimental drills are impossible because companies get lost, captains become separated from their companies, and mounted men have to trust to the instinct of their mounts to get them back to cover. The sand is a foot deep at all times, and from six feet to a mile deep when the wind blows strong.

You can imagine that the presence of 25,000 men at a given spot in such a desert does not have a tendency to allay the plague of sand. By almost superhuman effort hard roads have been built in camp. The suggestion that the plague of sand might be allayed by oiling the camp site would be very good were it not for the fact that it would exhaust the oil supply of the Republic to accomplish that end.

I unhesitatingly give it as my individual opinion that it was a grave injustice to the brave young men who enlisted, or who willingly accepted Army service, to submit them to such terrible conditions as I have outlined, especially when an equally convenient camp site along the border might easily have been found where the sand plague might have been avoided.

You think that camp site was inspected the same as every other?

Gen. McCain. Yes; if I recall correctly, Gen. H. A. Green was at the head of the board that selected it, and Gen. Parker, I think, was the commander of the Southern Department at that time.

Mr. SHALLENBERGER. I got this from a Nebraska paper, and it is the report of an accredited representative of the governor of Nebraska. Have there been complaints from any other State about that camp?

Gen. McCain. Not that I recall.

Mr. KAHN. That was spoken about on the floor of the House. That camp was used as a camp during the Mexican border trouble, was it not?

Gen. McCain. It was used by the State.

Mr. HULL. The governor of Iowa was here yesterday, and he sent a commission down there exactly like that referred to by Mr. Shallenberger, in answer to complaints that came from people in Iowa. There are a large number of Iowa troops there, and I have heard the same thing as was referred to by Gov. Shallenberger, and the governor of Iowa read a report of a commission he sent down there bearing out almost word for word what Mr. Shallenberger read.

Mr. SHALLENBERGER. This representative of the governor of Nebraska also states that the town has only 1,500 inhabitants, and that rents for accommodations for officers have gone up until it is not uncommon to find two and three room apartments renting for as high as \$80 to \$100 a month, while four and five room cottages readily rent at from \$100 to \$175 a month. He says that storerooms that formerly went begging at from \$12.50 to \$20 a month are now renting at from \$125 to \$200 a month. In other words, not only is

the place apparently unsuitable because of the sand conditions, but the rents have gone up until they are abnormally high.

Gen. McCain. The prices of rents are all high down there.

Mr. SHALLENBERGER. This representative of the governor of Nebraska goes on to say:

But whoever is responsible for locating an Army camp on such a God-forsaken, sand-plagued, wind-swept desert is also responsible for a lot of overtime work on the part of the recording angel. When the average soldier finds cause for cursing, he is usually equal to the occasion. I indorse every cuss word I heard when the sand was the topic of conversation.

Mr. ANTHONY. Has the department any control over cases of extortion practiced in the vicinity of military camps; for instance, in the prices of articles sold to the soldiers?

Gen. McCain. I do not think they have, except that they can clean out anybody who becomes a nuisance, in the zone range.

Mr. ANTHONY. But where a soldier is being robbed, there is nothing to protect him?

Gen. McCain. Except to keep these people out and not let them operate inside of or near the camp.

Mr. ANTHONY. Will you put in the record the information you said you had in reference to the Porto Rican organization?

Gen. McCain. Yes.

(Thereupon the committee adjourned to meet to-morrow, Friday, February 8, 1918, at 10:30 o'clock a. m.)

SUPPLEMENTARY STATEMENT MADE BY THE ADJUTANT GENERAL OF THE ARMY.

SELECTION OF CAMP SITES AND CANTONMENT SITES.

Department commanders were directed on May 7, 1917, to appoint boards of officers to select sites in their respective departments. This was done, and the department commanders, after getting the reports of the boards, submitted them to the War Department with their own recommendations. The department commanders at the time were: Northeastern Department, Brig. Gen. Clarence Edwards; Eastern Department, Maj. Gen. J. Franklin Bell; Southeastern Department, Maj. Gen. Leonard Wood; Central Department, Maj. Gen. Thomas H. Barry; Western Department, Brig. Gen. Hunter Liggett; Southern Department, Brig. Gen. James Parker.

The sites recommended by the boards of officers appointed by the department commanders were as follows:

Northeastern Department.—Ayer, Mass.

Eastern Department.—Yaphank, Long Island, N. Y.; Wrightstown, N. J.; Annapolis Junction, Md.; Petersburg, Va.

Southeastern Department.—Columbia, S. C.; Atlanta, Ga.; Little Rock, Ark. (this site was the fourth choice of the board, which recommended Alexandria, La.; Hattiesburg, Miss.; Meridian, Miss.; and Little Rock, in the order named; Little Rock was ultimately chosen); Spartanburg, S. C.; Augusta, Ga.; Anniston, Ala.; Greenville, S. C.; Macon, Ga.; Montgomery, Ala.; Hattiesburg, Miss.; Fayetteville, N. C. (this site was chosen at first, but on account of inadequate water supply was rejected, upon Gen. Wood's recommendation, and Charlotte, N. C., substituted); Alexandria, La.

Central Department.—Chillicothe, Ohio; Louisville, Ky. (this site was the second choice of the board, Jeffersonville, Ind., having been placed first; Louisville was finally selected); Battle Creek, Mich.; Rockford, Ill.; Des Moines, Iowa (this site was the second choice of the board, the Twin Cities site in Minnesota having been first choice; Des Moines was finally selected as most suitable and available); Fort Riley, Kans. (this site was the third choice of the board, Fort Leavenworth, Kans.; Colorado Springs, Colo.; and Fort Riley having been recommended in the order named; Fort Riley was finally selected).

Southern Department.—Fort Worth, Tex.; Dallas, Tex. (this site was recommended by the board and by the department commander, but was later eliminated. Fort Sam Houston having been chosen instead); Waco, Tex.; Houston, Tex.; McAlester, Okla. (this site was recommended by the board and by the department commander, but was later eliminated in favor of Fort Sill); Deming, N. Mex.

Western Department.—American Lake, Wash.; Linda Vista, Cal.; Palo Alto, Cal.

The sites as finally selected and the names given to the camps at these sites are as follows:

Site.	Name of camp.
Spartanburg, S. C.	Camp Wadsworth.
Augusta, Ga.	Camp Hancock.
Anniston, Ala.	Camp McClellan.
Greenville, S. C.	Camp Sevier.
Macon, Ga.	Camp Wheeler.
Waco, Tex.	Camp MacArthur.
Houston, Tex.	Camp Logan.
Deming, N. Mex.	Camp Cody.
Fort Sill, Okla.	Camp Doniphan.
Fort Worth, Tex.	Camp Bowle.
Montgomery, Ala.	Camp Sheridan.
Hattiesburg, Miss.	Camp Shelby.
Alexandria, La.	Camp Beauregard.
Linda Vista, Cal.	Camp Kearny.
Ayer, Mass.	Camp Devens.
Long Island, N. Y.	Camp Upton.
Wrightstown, N. J.	Camp Dix.
Admiral, Md.	Camp Meade.
Petersburg, Va.	Camp Lee.
Columbia, S. C.	Camp Jackson.
Atlanta, Ga.	Camp Gordon.
Chillicothe, Ohio.	Camp Sherman.
Louisville, Ky.	Camp Taylor.
Battle Creek, Mich.	Camp Custer.
Rockford, Ill.	Camp Grant.
Little Rock, Ark.	Camp Pike.
Des Moines, Iowa.	Camp Dodge.
Fort Riley, Kans.	Camp Funston.
Fort Sam Houston, Tex.	Camp Travis.
American Lake, Wash.	Camp Lewis.
Charlotte, N. C.	Camp Greene.

Fort Riley, Kans.—The board which inspected the sites at Fort Riley, Kans., was composed of Col. E. W. Evans, Cavalry; Maj. Wildurr Willing, Corps of Engineers; Capt. S. J. Turnbull, Medical Corps; Capt. C. H. Canby, jr., Quartermaster Reserve Corps; and Maj. G. Sturtevant, Twenty-fourth Infantry. Fort Riley was the third choice of the board, it having recommended Fort Leavenworth, Kans.; Colorado Springs, Colo.; and Fort Riley in the order named.

The sites inspected at Fort Riley were the Ogden Flats, the Smoky River Flats, and the Republican Flats. The board stated in its report that the grounds on each of these sites were regarded as being too low for the establishment of anything like a permanent camp and that the available camp sites at Fort Riley were believed to have other very undesirable features—extreme heat in summer, insect pests, and the possibility of floods, with the added objection that there was but one railroad passing through the reservation.

While the board recommended Fort Leavenworth as the most desirable site and did not favor Fort Riley, it was stated in its report that the sites at Colorado Springs and Fort Riley were considered as available and adapted for the purposes and that, of the two latter, Colorado Springs was considered preferable.

In forwarding the board's report, the commanding general, central department, stated that, while he accepted the board's unanimous recommendation for placing the cantonment at Fort Leavenworth, the maneuver grounds available at that post were limited, and he also called attention to the fact that there

is no opportunity there for artillery firing. He stated that he personally preferred placing these cantonments on military reservations, and therefore preferred Fort Riley to the site at Colorado Springs, which latter is on private property. He also called attention to the fact that there are 22,000 acres on the Fort Riley Reservation most suitable for artillery and other ranges and for maneuver purposes, and stated further, that, while the fact was not regarded as being of great importance, the facilities for the training of mounted troops at Fort Leavenworth were much less than at Fort Riley or Colorado Springs.

The War Department, having adopted the policy of locating these cantonments on military reservations wherever practicable, called upon the department commander for a specific recommendation with regard to the relative merits of Fort Riley and Fort Leavenworth as a site, and the department commander recommended Fort Riley on account of the greater available area at that place for training purposes. The War Department then approved Fort Riley as the location for the cantonment.

The name of the officer or officers responsible for the selection on the Fort Riley Reservation of the present camp site is not shown by the records.

Fort Sill, Okla.—The board that inspected the site of Camp Doniphan at Fort Sill, Okla., was composed of Brig. Gen. C. G. Morton, Lieut. Col. W. J. Barden, Corps of Engineers; Maj. J. R. Shook, Medical Corps; Maj. H. L. Laubach, Nineteenth Infantry; and Capt. Charles E. Wheatley, Quartermaster Corps. The board did not recommend Fort Sill on account of the supposed inadequate water supply, but when it developed later that the authorities at Lawton, Okla., were willing to furnish all the water required, the War Department approved the department commander's recommendation to locate a cantonment at this post, because of the facilities for training afforded by the large military reservation and on account of the various utilities already constructed there and owned by the Government.

Little Rock, Ark.—This site was favorably reported upon by the board, but was the board's fourth choice, it having recommended Alexandria, La.; Hattiesburg, Miss.; Meridian, Miss.; and Little Rock, in the order named. The board's reasons for not giving Little Rock a higher rating lay in the fact that malaria was present there, due to certain undrained areas in the vicinity. As the War Department desired to locate the National Army cantonment for the twelfth divisional area (Arkansas, Mississippi, and Louisiana) within the limits of that area, the department commander was asked to investigate further the Little Rock site or some other good site. In replying, Gen. Wood called attention to the fact that the city had offered 3,000 acres free to the Government and had appropriated \$50,000 for mosquito eradication to remove the malarial conditions, and he recommended that this site be approved on account of the unusual railroad facilities, the many land-grant roads, the size of the city, the desire and ability of the citizens to cooperate, and the climatic conditions, a desirable feature of which is the low relative humidity prevailing during the summer months.

Fayetteville, N. C.—This site was originally selected and approved, but it developed that the water supply was entirely inadequate and that a new supply would have to be tapped, and it was decided, after further study by the department commander and upon his recommendation, to designate Charlotte, N. C., for the purpose instead of Fayetteville.

Louisville, Ky.—This was the second choice of the board, it having placed Jeffersonville, Ind., first. In remarking upon the board's action the department commander stated that the board's whole report was inconclusive and would require consideration by the War Department before action was taken. The department commander himself recommended the site at Lexington, Ky., which was placed fifth by the board. Louisville was finally approved by the War Department as being the most desirable site on account of the unusual advantages afforded by that location.

Des Moines, Iowa.—This site was the second choice of the board and the department commander, the Twin Cities site in Minnesota having been recommended as the first choice. The War Department regarded the cost of the Twin Cities site as prohibitive, and Des Moines, being suitable and available, was selected after consultation with the department commander, who recommended that action.

Fort Riley, Kans.—The board recommended Fort Leavenworth, Colorado Springs, and Fort Riley in the order named, and the department commander approved the board's proceedings, except that he preferred Fort Riley over

Colorado Springs on account of the fact that the site at the latter place was on private property. He called attention, however, to the fact that Fort Riley had certain advantages over Fort Leavenworth in that there were 22,000 acres of land on the Fort Riley reservation which were very suitable for artillery and other ranges and for maneuver purposes, and that the maneuver grounds at Fort Leavenworth were limited and gave no opportunity for artillery firing. Fort Riley was eventually approved by the War Department after recommendation by the department commander as being the most desirable site.

Dallas, Tex.—The site at Dallas was recommended by the board and by the department commander, but as it was not deemed advisable to locate more than four cantonments in Texas and as it was desired for cogent reasons to locate a cantonment on the military reservation at Fort Sam Houston, the Dallas site was eliminated by the War Department after careful consideration. The sites at Houston, Fort Worth, and Waco, Tex., were approved.

McAllister, Okla.—This site was recommended by the board and by the department commander, but was later rejected in favor of Fort Sill, Okla. The change to Fort Sill was made for the reason that the objections raised by the board to this site were later removed when the city of Lawton agreed to supply sufficient water. The department commander then reported Fort Sill as available for selection. The War Department decided upon Fort Sill because of the facilities for training afforded by the large reservation already under Government control and on account of the various utilities already constructed there and owned by the Government.

CAPACITY OF THE CAMPS AND CANTONMENTS FOR ENLISTED MEN.

The capacity of the 16 National Army cantonments for enlisted men, allowing 500 cubic feet of air space for each man, is approximately 628,805.

The capacity of the 16 National Guard camps for enlisted men is approximately 503,959.

NUMBER OF OFFICERS COMMISSIONED FROM CIVIL LIFE WITHOUT GOING THROUGH TRAINING CAMPS AND THE RANK THEY NOW HOLD.

Of the 125,980 officers now serving in the Army of the United States, approximately 42,161 were commissioned from civil life without having received a course of military training at officers' training camps. The grades in which they are now serving follow: Major general, 1; brigadier generals, 4; colonels, 98; lieutenant colonels, 202; majors, 2,472; captains, 6,015; first lieutenants, 31,192; second lieutenants, 2,177. Total, 42,161.

APPOINTMENT OF PROVISIONAL SECOND LIEUTENANTS.

Since the passage of the national defense act, June 3, 1916, directing that hereafter appointments to the grade of second lieutenant shall be made provisionally for two years, there have been 4,574 candidates so appointed.

There are two eligible lists, one from the July (1917) examination, which includes those examined at the first training camps, and the other from the second training camps. The first list contains 1,162 names, but some of the candidates on this list are civilians and are still undergoing training at Fort Leavenworth, Kans., and their names will not be permanently placed on the eligible list until the completion of the training, February 25, 1918, and they have been reported as qualified. The second list from the second training camps was to contain 1,000 names, but not quite that number have been found qualified.

No limit has been placed on the eligibility of candidates on the eligible list other than that imposed by law and the action of the President upon the termination of the war.

Of these officers, 33,423 (including the major general and the 4 brigadier generals) are in the Medical Department, 162 are in the Judge Advocate General's Department, and 498 are chaplains. In the large majority of the remaining cases military training had been received prior to appointment, many of them having served for years in the Regular Army or the National Guard, a considerable number as officers; 502 Engineer officers are also included in the above number. These are experts in some particular line, as railroad experts, etc., and this also applies to a large extent to appointments that have been made in all the various staff corps and departments. Very few appointments

are now being made direct from civil life, as practically all bureaus of the War Department have established special training camps.

Civilians of the July examination are undergoing training at Fort Leavenworth for the mobile Army, and at Fort Monroe for the Coast Artillery. The training at Fort Leavenworth will be completed February 25, 1918, and that at Fort Monroe March 27, 1918. Until the completion of the training at each training camp, the number of candidates undergoing training for a place on the eligible list who have been found not qualified will not be known. Only one such candidate has been officially reported to the War Department, although it is known that several have been found not qualified.

An examination was held in July, 1917, to determine the fitness of candidates for provisional appointment as second lieutenants in the Regular Army. This examination was held before examining boards and included an academic examination, as well as at training camps where no academic examination was required. Many more candidates were examined and found qualified than there were vacancies to which they could be appointed.

The law governing such appointments (national-defense act) provides that the qualified candidates shall be divided into classes for appointment as follows:

1. Graduates of the Military Academy.
2. Enlisted men of the Regular Army, including officers of the Philippine Scouts and members of the National Guard of at least 90 days' Federal service.
3. Members of the reserve corps and honor graduates of distinguished colleges.
6. Civilians.

All qualified candidates of class 2 were appointed with rank from October 24, 1917, and all qualified candidates of class 3 were appointed with rank from October 25, 1917. Those candidates of class 6 for whom there were vacancies were appointed with rank from October 26, 1917. The last candidates of class 6 to receive an appointment in the mobile Army attained a general average of 80 per cent. There still remained approximately 500 qualified candidates of class 6 for whom there were no vacancies. The mental disqualifications of approximately 500 more who were found physically and morally qualified were waived, and it is these candidates who either now do or will very soon constitute the eligible list for appointment in the Regular Army as vacancies may hereafter occur.

All those candidates from the first training camps who were found qualified in the examination for appointment in the Regular Army were appointed second lieutenants in the reserve corps at the close of the camps in August, 1917, pending their appointment in the Regular Army. Those who were appointed in the reserve corps, but for whom there were no vacancies in the Regular Army in October, 1917, are still on duty under their reserve corps commissions with regiments of the Regular Army. As far as their eligibility for appointment in the Regular Army is concerned, they will continue on their present duty until vacancies in the Regular Army may occur, to which they will be appointed.

At the present moment there are 102 vacancies in the grade of second lieutenant in the mobile Army, and when the vacancies on the detached officers' list shall have been filled there will be 127 more vacancies in the grade of second lieutenant to be filled by the appointment of candidates from the eligible list. This last number of vacancies includes 28 vacancies in the Coast Artillery Corps.

As soon as the report of the qualified candidates shall be received from Fort Leavenworth, and every candidate is placed in his proper place on the eligible list, it is the intention of The Adjutant General's office to fill the vacancies in the grade of second lieutenant in the mobile Army at the earliest possible date.

Those civilian candidates who are now undergoing training at Fort Leavenworth and at Fort Monroe and who are found qualified will at once be appointed in the Officers' Reserve Corps to await their appointment in the Regular Army.

ARRANGEMENTS MADE FOR THE PORTO RICO DRAFT CONTINGENT.

On December 22, 1917, the Provost Marshal General was informed, by direction of the Secretary of War, that when adequate shelter and supplies shall have been provided the necessary steps should be taken to call into active service and mobilize at San Juan, P. R., the Porto Rico contingent of the selective draft, about 12,800 enlisted men.

The cantonment division of the Quartermaster General's office was instructed to proceed without delay to provide a suitably constructed camp at San Juan similar to those constructed for the National Guard divisions to accommodate about 12,800 enlisted men and about 650 officers, the housing to be in tents, framed and floored, at the rate of one pyramidal tent, large, for each six men.

The Quartermaster General was instructed to provide the necessary tentage, clothing, and other quartermaster supplies and camp equipage and a suitable allowance of transportation.

The Chief of Ordnance was directed to furnish the necessary arms, ammunition for target practice, and other ordnance stores.

It is expected that the barracks formerly occupied by the Porto Rico Regiment of Infantry will provide suitable hospital accommodations.

The contingent, when mobilized, will be organized into eight white and four colored provisional training battalions. The whole will be organized into a provisional division consisting of three provisional regiments.

The present plans provide that a brigadier general will command the provisional division, and that he will have an appropriate division staff to assist him. The brigadier general has not yet been designated.

ARMY APPROPRIATION BILL, 1919.

COMMITTEE ON MILITARY AFFAIRS,
HOUSE OF REPRESENTATIVES,
Friday, February 8, 1918.

The committee met at 10.30 o'clock a. m., Hon. S. Hubert Dent, jr. (chairman), presiding.

STATEMENT OF MAJ. GEN. JOHN BIDDLE, ACTING CHIEF OF STAFF.

The CHAIRMAN. General, there are a few items in the appropriation bill which relate to the office of the Chief of Staff about which the committee wants some information. The first item is on page 2. "Contingencies of the Army." You are asking for \$300,000 and you had for last year \$100,000.

Gen. BIDDLE. Mr. Chairman, there are a number of small items given in the estimates which are about the same as they were last year, excepting an increase due to the fact that we have a larger establishment. There is, however, a tremendous increase in the last item, called unforeseen contingencies. It is difficult to state exactly how that money will be spent. I have here a statement as to what has been done with that fund for last year, and there may be similar items come up or there may be new ones. It is the only fund which is at the disposal of the Secretary of War for any of these contingencies. We had \$100,000 last year which was allotted for this purpose, and we have spent up to the present time about \$80,000, so that it looks as if we would probably have a deficiency for the rest of this year. It is simply the best estimate that can be made ahead of time as to what these unforeseen contingencies may be.

The CHAIRMAN. What is the amount of that?

Gen. BIDDLE. \$263,000; making in all \$300,000. If it is of interest to you, Mr. Chairman, I will give you an idea of how it was spent in the last six months. There was an item, for instance, for the purchase of lithographing tables, and a large item was the establishment of the statistical division in The Adjutant General's Office which amounted to \$35,000; expenses of entertainment of high French and British officials, \$5,000; expenses of the cantonment adjustment commission, \$5,000; purchase of law books for the American Expeditionary Forces, \$17,000; expenses of the French Scientific Commission, \$3,000. Those give you a general idea of what these unforeseen contingencies are. For the next year we do not know what they will be. We believe from the past that we are liable to have a demand for that amount; and, as I say, it is the only fund which the Secretary has for these purposes.

The CHAIRMAN. Will you put in the record an itemized statement of the amount under each one of these subdivisions in this item?

Gen. BIDDLE. The items are in the estimates, so far as we can really give them.

The CHAIRMAN. I want that to go in the record so as to show what you are asking for under each one of these subdivisions.

CONTINGENCIES OF THE ARMY.

[Estimated, 1919.]

Purchase of professional books, publications, etc.....	\$10,000
Photographic material and supplies.....	5,000
Confidential purposes.....	10,000
Travel expenses.....	5,000
Purchase of maps.....	2,000
Telegraphic services.....	3,000
Stationery and contingent expenses, office of the Chief of Staff.....	1,500
Unforeseen contingencies.....	263,500
Total.....	300,000

Gen. BIDDLE. Yes, sir. There is one item, which is called "travel expenses," which I thought you might ask about. That is for the travel expenses of the Secretary and the Assistant Secretary of War and the civilians he may send on any special work.

The CHAIRMAN. The next item is for the Army War College, \$9,000.

Gen. BIDDLE. That is the same as it was last year.

Mr. SHALLENBERGER. How can that department get along with the same amount of money in time of war that it had in time of peace?

Gen. BIDDLE. Because there are other items in the way of clerks, etc., which come in later on.

The CHAIRMAN. The next item is "Contingencies, military information section, General Staff Corps, \$2,000,000." You had \$1,000,000 last year.

Gen. BIDDLE. It is very hard in a case like that to give the details. I have talked it over thoroughly with the chief intelligence officer, who is Col. Van Deman, and he has to base his estimates largely on what he thinks he will need rather than on any definite information. He has consulted the experience of the English Government and the French Government in doing intelligence work, and his estimate, he tells me, is largely based on their experience. He has to have, to begin with, a very large clerical and messenger force here, amounting to \$300,000, and he has to have also a number of agents all over the country. He has at each one of these divisional camps and cantonments intelligence officers who have certain counterespionage work to handle. He also has a number of secret agents. He estimates about \$400,000 for the agents and about \$400,000 for their expenses. Their expenses are pretty hard to itemize and pretty hard to state in advance, in that you have to allow them leeway in the work in obtaining the information, and they are given a great deal of independence. Col. Van Deman exercises such control as he can, but his control is largely in choosing the proper men to do this work. Besides the work here, Gen. Pershing has asked for \$500,000 for his work in France, and another \$500,000 goes to the work abroad which is handled from here. One reason for the large increase is due to the fact that up to date we have been relying largely on our allies for our

information about the enemy, both as obtained in France and in other places; and we feel we should bear our share of those expenses, and so, \$500,000 is for work all over the world to get information.

The CHAIRMAN. After all, necessarily, an item of this kind must be largely guesswork a year and a half in advance.

Gen. BIDDLE. It is, except, as I say, we know that up to the present time this year we have spent between three and four hundred thousand dollars, and, of course, the work is just beginning.

Mr. TILSON. General, what kind of record is kept of the expenditures under this fund, so that a year hence if anybody wants to know just what has been done with it, they can ascertain at that time?

Gen. BIDDLE. You could ascertain how much went for salaries and how much for expenses and everything of that kind.

Mr. TILSON. But it would be lumped in that way, so much for salaries, etc.?

Gen. BIDDLE. No; the officer in charge would be able to tell how much he paid each individual man and how many men he had, and everything of that kind. He might not be able to tell just exactly what the man's expenses were in the way of paying spies, or something like that, but he would be able to tell in detail what each man had been given and the general nature of his work.

Mr. TILSON. It is perfectly obvious, General, that in advance nobody can tell about an appropriation of this sort, and nevertheless it is an appropriation that might in the long run be easily abused, so that my question went to whether or not to would be impossible hereafter to get an intelligent idea of what has been done with it in case there were any criticisms or any accusation of abuse of the fund.

Gen. BIDDLE. There is no question of that being done, because he has to keep his accounts and payments in that way. He keeps a fairly accurate statement of what he has done up to date.

Mr. KAHN. General, is the Bureau of Intelligence making investigations as to the loyalty of people in this country?

Gen. BIDDLE. Yes, sir; we have intelligence officers at the divisions who keep track of men who may be around the different cantonments, and then if anybody is in any way suspicious or if his name is given as a suspicious person it is investigated thoroughly.

Mr. KAHN. Is there any duplication of work, or do you work in harmony with that branch of the Department of Justice which is also investigating cases of disloyalty?

Gen. BIDDLE. Yes, sir; we keep in very close touch with them in all things and try not to duplicate their work.

Mr. KAHN. When you get a fairly good case against a man who is disloyal, do you just send him to one of the internment camps?

Gen. BIDDLE. Yes, sir; if it is an evident case.

Mr. KAHN. Suppose a man commits acts which, if he were a citizen, would be considered treasonable, would the military authorities try him?

Gen. BIDDLE. I think we would probably report that to the Department of Justice.

Mr. KAHN. Is there any method by which the military authorities can try a case of an American citizen, for instance, who is giving aid and comfort to the enemy?

Gen. BIDDLE. It never has been done, as far as I know; but I can see no reason why it could not be done; and in France especially I think it probably would be done. But we have here the civil tribunals, and the chances are, I think, we would turn them over to them when possible.

Mr. KAHN. Of course, it is a very serious condition that confronts us, and we all recognize the fact that there is altogether too much disloyalty in this country, and I wish there were some way to get at them in a very summary manner.

Mr. GORDON. As I understand, there has been no execution in the military service?

Gen. BIDDLE. None has been brought to my attention.

Mr. GORDON. There has been none kept from you?

Gen. BIDDLE. Not that I know of.

Mr. GORDON. Do I understand you correctly to say that you can not see why the Army should not try people for disloyalty in the service?

Gen. BIDDLE. Mr. Kahn asked me if there was any objection to turning them over, not especially in France, but in this country, to the civil authorities or civil tribunals, and I replied in the affirmative.

Mr. GORDON. There was a case in the Civil War, the Milliken case, in which they tried three men by court-martial, and the Supreme Court discharged them on the ground that the military authorities had no jurisdiction. That is still the law and is recognized by the military authorities?

Gen. BIDDLE. That would be my general idea, that we would only undertake it where the civil tribunal fell down.

Mr. GORDON. What do you mean; failed to convict him?

Gen. BIDDLE. There might be a case in the face of the enemy where something would have to be done.

Mr. GORDON. Where active military operations are going on. In that connection I would call your attention to the fact that Indiana was in a military zone; it was declared to be a military zone; there had never been any insurrection and the courts were open, and therefore the court said that the military authorities had no jurisdiction and could not obtain jurisdiction in the State of Indiana. There has been no attempt of that kind on the part of the military authorities to try men in civil life? That is quite an important question.

Gen. BIDDLE. I do not think there is any disposition on the part of the Army authorities to take any authority away from the civil courts.

Mr. GREENE. If it is not antagonistic to the policy of the department I should like to ask you this question: The report is in circulation as to military prisoners that they condemn a man to death and have carried that sentence into execution and there has been no publicity about it. Are you prepared to say now, as Acting Chief of Staff, whether the policy of the department up to this time has contemplated such a course of action?

Gen. BIDDLE. The present instructions are that no death penalty shall be given without referring it to these headquarters.

Mr. GREENE. Which means the President eventually, as Commander in Chief?

Gen. BIDDLE. Unless the Secretary wishes to take action. It would come to me and I would refer it to the Secretary, and it would, if he so directed, go to the President.

Mr. GREENE. Even under those conditions is it understood to be the policy that the Secretary would order the carrying into execution of such a sentence and that there would be no publicity about it?

Gen. BIDDLE. It has never been done, so far as I know. The only sentence which was carried out that I know of was the case of the colored soldiers down South, and that was given publicity.

Mr. GORDON. As a matter of fact, the execution of the negroes down in Texas was done without the previous approval of the sentence by the President.

Gen. BIDDLE. Yes, sir.

Mr. GORDON. And therefore a regulation was issued prohibiting that sort of thing hereafter?

Gen. BIDDLE. Yes, sir; but the commanding officer was entirely within the law.

Mr. GORDON. Within the Articles of War?

Gen. BIDDLE. Yes; but it was considered better policy to submit the cases for approval, and orders were issued that any death sentence shall be sent up to the headquarters for approval.

Mr. CRAGO. General, regarding the appointment of officers, etc., in the National Guard units, section 76 of the national-defense act of June 3, 1916, provides that vacancies in the National Guard, after drafted into the service of the United States, shall be filled by the President, as far as practicable, by the appointment of persons similarly taken from said guard. Would you care to say whether that is the policy?

Gen. BIDDLE. It is the policy, and it has been always the policy. There may have been one or two exceptions, but it has only been in very rare instances. There may have been cases in the guard where they desired a Regular officer to command a brigade or division or a regiment.

Mr. CRAGO. I have in mind a division where the major general of the division has been appointed from the Army, and he never had any connection with the National Guard. Now, they have two vacancies in brigade commands, and they have a surplus of colonels who are retarding the promotion of other men in the organization by reason of the fact that they seek to give the surplus officers the command of organizations wherever they can. Would it be the policy of the department to recommend some of these colonels for promotion to brigadier general in the division?

Gen. BIDDLE. If they are competent; yes, sir.

Mr. CRAGO. Would it not be well to put them in, if they only last 10 or 15 days, so that the young men in the organization might have a chance?

Gen. BIDDLE. The question of surplus officers of the National Guard has been a very difficult one to handle. We are trying to take care of all of those who are efficient. When we make promotions we consider the National Guard officers just as much as any others; but we are rather slow about making promotions to general rank so as to be more sure what we are doing.

Mr. CRAGO. In this case you have a man who has been in command of the regiment probably 10 or 15 years—a very competent regimental commander. Do you not think that it would be entirely fair to give him a chance to command the brigade rather than take some officer from the Regular Establishment who probably has never even commanded a regiment?

Gen. BIDDLE. I think that each individual case has to be settled by itself. Without knowing the situation and the special organization, I can not say, but our general feeling is to promote National Guard officers whenever we think they are competent. On the other hand, it must be said that when it comes to general officers even the National Guard often prefers to have a Regular officer.

Mr. CRAGO. That may be true in certain cases. I am very glad to see that you have done that in the New York division. I think it is a great compliment to Gen. O’Ryan. I believe he deserves it.

Gen. BIDDLE. I agree with you.

Mr. CRAGO. I rather think they missed the intent of section 77 when they did appoint these officers to the National Guard organizations to command the organizations, other than the ones with which they had been connected. Section 77 provides that officers of said guard rendered surplus by the disbandment of their organizations shall be placed in the National Guard reserve. In the Pennsylvania division they disbanded a regiment and one regiment substantially absorbed another. Then they took the colonel of the regiment which had been disbanded and put him in command of this old organization, because there happened to be a vacancy in the colonelcy of that regiment. Do you think, General, that that is likely to keep up the organization spirit very much?

Gen. BIDDLE. To put one of the colonels in command?

Mr. CRAGO. Here is one organization from the extreme eastern end of the State. That organization was not considered very efficient. It was disbanded and the men assigned to the regiment from the extreme western end of the State, organized and raised under entirely different conditions, with an entirely different class of men, yet the colonel of the eastern regiment was put in command of the western regiment because there happened to be a vacancy in the western regiment by reason of the promotion of the former colonel of that regiment to a brigadier generalship in the Army.

Gen. BIDDLE. The division commander in each of those cases was given full authority to organize their division and to do what he thought necessary in the most efficient way. I would say, to answer your question, that it would be better organization to transfer the colonel to that regiment rather than to promote some one and still have this colonel to be taken care of.

Mr. CRAGO. Of course, he will go into the National Army rather than into the reserves?

Gen. BIDDLE. Yes, sir. The extra officers are held simply for such length of time until we can give them commands. We do not keep them there indefinitely.

Mr. CRAGO. Following the tenor of section 77, if you promoted some of these colonels to brigadiers, you would solve this very problem?

Gen. BIDDLE. We will do that in time if they are declared efficient, because it is our policy and desire to give the National Guard officers every opportunity to command.

Mr. CRAGO. I think those things have caused more trouble with the **National Guard organization than any lack of equipment or lack of proper camp arrangements or anything of that kind.**

Gen. BIDDLE. I am aware of it. At the same time, they can not be put in the organization to which they originally belonged, and we are trying to place them where they can get command in accordance with their rank.

Mr. SHALLENBERGER. General, on the matter of National Guard officers we had a statement from The Adjutant General yesterday that 662 National Guard officers have been dismissed from the service for one reason and another since we entered the war. There are 13,823 National Guard officers. In the Reserve Corps, the National Army, there are 39,779 officers, practically 40,000, and only a very few—four or five or six—among that great number have been found inefficient. Yet none of those officers had more than three months' training, as a rule, in training camps, and thousands have been citizens who were brought into the Army without any training at all, and there were very few, while there was this great number in the National Guard.

Gen. BIDDLE. There are two answers to that question. In the first place, only a portion of those who go to the training camps get commissions. The other is, the boards that report on these officers do not report on an officer and recommend his discharge simply because he has not learned all of his duties. They report him as a man who is liable to be a good officer, who has shown the qualities of zeal, ability, etc., and who in time will become a good officer. In the reports of these boards, and I have read a good many of them, they never discharge a man because he has not learned to do this or he has not learned to do that, but because he has not shown improvement, zeal, or other qualities of an officer. As you know, these boards in the divisions have a majority of National Guard officers, and, of course, we always, or practically always, promote a National Guard officer.

Mr. TILSON. That is only quite recently?

Gen. BIDDLE. No, sir; it has always been that way. In the divisions they are practically all National Guard officers, just the division commander and some dozen others out of several hundred are regular officers, and naturally they would put on a majority of the National Guard officers on any board, but in order that there should be no question about that, two months or so ago an order was issued that there should always be a majority of National Guard officers, except in cases where it was impracticable, and then the commanding general should report the facts to these headquarters.

Mr. HARRISON. I have a case right now where that was not done.

Gen. BIDDLE. I will say in addition, that any case brought up as to injustice we have always followed it up and sent an inspector.

Mr. SHALLENBERGER. I should like to ask if it has not been the policy to spend all of the time in discovering the inefficient officers in the National Guard, and not those in the other departments, so that there has been no culling performed upon them?

Gen. BIDDLE. That is not strictly so. The culling has been more in the National Guard, but that has been, I think, for the reason that I gave you before, that these men who came from the training camps have been culled and while they did not know all the details of mili-

tary work to start in, it was considered that they would learn if given an opportunity.

Mr. SHALLENBERGER. I have had, in fact, correspondence with some of the soldiers from my own State and one of the greatest troubles has been the fact that these young men, just brought into the service, with very little, if any experience, apparently are not inefficient at all.

Gen. BIDDLE. I do not know the figures.

Mr. SHALLENBERGER. They are in the records. None of these majors and colonels who have come in from civil life have been declared useless.

Gen. BIDDLE. There is only one answer that I can make, that those men were picked specially for that high rank after careful culling. It is the duty of the division commander to have his division as competent as he can, and if he does not report a man to us for inefficiency we have usually no knowledge of his efficiency. I think the general inspection shows that these men from the training camps are a very splendid lot of young men, and, while they lack at the beginning some knowledge, they will acquire it. The knowledge which they lack and which the National Guard men have is in taking care of their men. They have not learned that. That will take time. That is the reason why the complaint comes from the soldiers. We feel that these young officers can learn those things. We do not want to take out of the Army anybody that we feel can learn, but those who can not or will not learn we wish to get rid of.

Mr. SHALLENBERGER. I can easily understand that among 40,000 it is possible to find some incompetent National Guard officers who are supposed to have been tried out in the past. After you get through with the National Guard you might pass an efficiency board on some of these corps also.

Gen. BIDDLE. We shall. The division commander can do so any time he pleases.

Mr. SHALLENBERGER. It has been developed before the committee that the National Guard has been the one last considered in the places where they are gathered, in the condition of their camps, etc., and the priority orders which were brought out here in the matter of supplies; in fact, a sort of showing here that they were not quite as well taken care of. It was shown that the death rate is higher than in any other branch of the Army, being two and one-half times that of the Regular Army. It is a matter of record here that the men called out for the National Army were put in these cantonments, built at great expense, thereby necessitating the putting of the National Guard into these temporary camps, where they had no hospitals properly prepared, no steam heat, no sewerage, and all that sort of thing. Those men were called out and the National Army was called out in the face of information being furnished that they were not prepared to take care of them; the Quartermaster Department had not the clothing for them, the camps were not finished, and the hospitals were not finished when they were called out. Can you tell us why it was deemed essential to the organization of the Army that these men should be called out at that time rather than the National Guard, when it became evident that you could not get the ships to send them abroad and have not yet, and, further, in view of the fact, as shown by the records, that more than a million men have

volunteered in excess of the National Army and you have plenty of men to fill these cantonments—why, in the face of that, did you call out the National Guard?

Gen. BIDDLE. I was not at the time. I only came here three months ago. My own idea is that they felt that if the United States would show that it was in earnest by bringing men actually into the field for training it would have a strong moral effect both on our country and on the countries abroad. Whether that was the actual guide, I do not know. That was my feeling. Of course, it must be said in addition that no one realized at the time the great trouble we would have with equipment and also with ships. The National Guard were put into tents simply because we hoped to get them over earliest.

Mr. SHALLENBERGER. Those men were called out in September. That is not a very long time, but it seems to me somebody should have discovered the shortage of ships. We are not going to have the ships now, according to the testimony of the Secretary of War, to move the National Guard, and we are not going to have the ships to move the National Army for a long time, and those men could have been kept in modern cantonments rather than to put them where they were. I do not hesitate to say that I think that is one of the activities of the Government and of the department which might subject them to criticism—the fact that this National Army was called out before the Government was prepared to take care of it, thereby forcing the National Guard to be put into these camps, where they have evidently suffered greater loss and where the conditions have been generally worse than they would have been if placed in modern cantonments for the winter.

Gen. BIDDLE. I am talking a little without being very familiar with the subject. My understanding is that the National Guard were all put in the South because it was considered that the location would be equally as healthy—in fact, more healthy—than more northern States. In case of the draft, where the men would probably remain all winter in camp and because of the desire to bring the men in the vicinity where they came from, a more substantial type of structure was needed on account of the climate.

Mr. TILSON. That was a distinction that did not wholly materialize, because Spartansburg, Charlotte, and those places are all in a section which we know is not really south. The weather this year has been very severe, and if you go back through the weather reports of each year you will appreciate that people in that part of the country would necessarily suffer almost as much as in this part of the country.

Gen. BIDDLE. But they would not suffer as much as in New York or Michigan or Ohio, and the winter does not last as long.

Mr. SHALLENBERGER. One of the greatest defects, in my opinion, was the lack of proper hospital facilities. The testimony shows that they had mere shacks for these men; they had very poor accommodations. They had a greater loss in the National Guard from disease than in any other branch of the Army, which, I think, is well explained by the fact that they had the poorest hospital accommodations. The National Guard of Nebraska was sent to Deming, N. Mex. I put in the record yesterday the testimony of the gov-

ernor's representative who went out there and told about the conditions. It is extremely cold at night in the wintertime and very warm in the summer, and instead of being a healthy climate for men from all latitudes, it is rather bound to be a dangerous climate.

Gen. BIDDLE. As a matter of fact, in the Army we think that tents are perfectly comfortable, if they have stoves.

Mr. SHALLENBERGER. But not for hospitals?

Gen. BIDDLE. No. I should like to add that as soon as this sanitary situation was reported, as soon as the first epidemic appeared, a board was sent, in the early part of November, to all of these hospitals. The epidemic was a surprise to us, and about the time I came back I issued instructions to have Gen. Gorgas and his party do and asked for whatever was necessary, and in consequence, we did express everything he asked for. I should also add that when we found that the equipment was short, especially in clothing, there were still 180,000 men from the first draft who had not been called. They were immediately stopped until the clothing became sufficient.

Mr. SHALLENBERGER. As an experienced officer and the Acting Chief of Staff of the United States Army, I want to ask you if it would not have been a better exhibition of the military power of this Nation if, as we called these men—there was no question about getting them—you had been in a position to take them and clothe them and give them all the equipment and accouterments that a soldier should have as fast as they came in?

Gen. BIDDLE. That is pretty hard to answer. Of course, as a general proposition, you should be ready for people before you call them. On the other hand, we did expect that by the time cold weather came we would have the clothing ready and that there would not be any real suffering.

Mr. SHALLENBERGER. Did you not have notice? It is a matter of record that the Quartermaster General went so far in his statement before the committee as to say that he wrote a letter to the War Department that he could only take them so fast and they came faster. He wrote three letters.

Gen. BIDDLE. I am talking a little bit in the air, not having been here.

Mr. SHALLENBERGER. You are not responsible for what occurred, I understand.

Gen. BIDDLE. I do not want to avoid responsibility. I want to give you some idea of what guided the action taken. I think the idea was to get men into training in the hope that they would in time get whatever equipment was necessary and that it would be possible to get them over to France sooner and that the men should have at least six months' training here before they went abroad. That was the plan, I think. That we have made mistakes in some matters is apparent.

The CHAIRMAN. And you were also trying to make a big show for the benefit of the allies?

Gen. BIDDLE. To my mind it was simply the moral feeling that we were doing something. If we had stood still for six months and had done nothing but accumulate supplies, that certainly would have had its effect in Europe. In the same way, the sending over of that small outfit with Gen. Pershing in the beginning had its effect in Europe, and I think this did, too.

Mr. FIELDS. General, in regard to the questions that have been asked by Gov. Shallenberger on the question of weeding out National Guard officers, I have in mind an officer whose resignation was asked for because of preexisting debts which he had incurred in a large financial transaction before he came into the Federal service. Is it the policy of the department to dismiss officers from the service because of such conditions?

Gen. BIDDLE. No, sir; not if he makes good. The only point to be considered would be the effect upon his future.

Mr. FIELDS. What do you mean by "if he makes good"?

Gen. BIDDLE. In a case like that my idea is, that if the fact of this man having these debts would indicate that he was an officer who would keep on making debts, and for that reason would not be a good officer, I would consider those conditions. But if a man, simply for one reason or another got into debt, which he was trying every day to pay off, and was honest at the bottom, I certainly would not consider that against him.

Mr. FIELDS. In other words, if he was doing everything an honest man could do under the circumstances to meet those obligations, it is not the policy of the department to ask for his resignation or to force him out of the service?

Gen. BIDDLE. That would not be my policy. Of course, the division commander has a large amount of latitude and there may have been other reasons, too. My own policy, in time of war, is that if a man is going to make good, the past, unless he is dishonest, counts but little.

Mr. FIELDS. Then if he was a good officer and there were no other reasons for asking for his resignation other than the fact that he owed these preexisting debts, and he was paying those debts on a pro rata or percentage basis, and his commanding officer asked for his resignation, he exceeded his authority and violated the policy of the department; is that my understanding?

Gen. BIDDLE. That is putting it pretty hard, because each case would have to be decided by itself.

Mr. FIELDS. You understand I said, if I stated it correctly.

Gen. BIDDLE. If a man for some reason or other had accumulated debts which were not accumulated in a dishonest way, and if that was the only thing against him, and if he was making every effort to pay them, and was a good officer, I myself certainly should not recommend his discharge.

Mr. McKENZIE. General, where the commanding officer of a division, having the authority to observe all the officers under him, asks an officer to resign, of course he does not make that request unless it is founded upon some state of facts.

Gen. BIDDLE. Yes, sir.

Mr. McKENZIE. Does he report to you or to the department here in Washington the grounds upon which he bases the request for the resignation? In other words, is there not a record made of it further than simply the commanding officer asking a subordinate officer to resign?

Gen. BIDDLE. The few cases that have been brought up to me have had a record with them. I remember there were three cases which came up recently from one of the States, I have forgotten now just

which one, which we investigated, and in each case the officer, in submitting his resignation, had given the reasons for it.

Mr. McKENZIE. In the case that Mr. Fields cites the reasons would appear from his statement, and if those were the reasons it would be so stated, and if there were any other reasons they would also be stated; is not that true?

Gen. BIDDLE. Yes, sir; but, of course, there is this to be said, if the officer submitted his resignation willingly, it would be accepted even on that ground. We have had one or two resignations where the man stated he was in financial difficulties which he could not pay off and therefore he asked that his resignation be accepted.

Mr. FIELDS. In reply to the question of Mr. McKenzie, you said that the officer tendering his resignation makes a statement. I infer from that that you get no record from the officer who requested his resignation?

Gen. BIDDLE. Not necessarily. Of course, if the officer objects in any way or wishes to present the case to us, that would be done; or if he is asked in writing to submit his resignation; but if his division commander simply asks it verbally, we would not necessarily have it here.

Mr. FIELDS. General, this is the thought I had in mind in asking my question. Many of the men in the National Guard were men engaged in business before they went into the Federal service, and they were called away suddenly from their business and many of them doubtless had incurred financial obligations at the time. Now, if the department is going to take notice of that, although those obligations may have been incurred in a perfectly legitimate way and because of the high standing of the man he was able to get such credit, it seems to me it is going to work a great hardship upon the National Guard officers and upon other men who may be drafted into the service who are capable of making good officers, but who know that if they succeed in getting commissions these complaints are liable to be filed against them.

Gen. BIDDLE. I can not imagine a case of a man being discharged or asked to resign, as you put it. Of course, there may have been individual cases up, but I can not imagine from the statement you make that man should be asked to resign, unless there was something more than you have stated.

Mr. FIELDS. They are the facts as presented to me. The case I had in mind was the case of a man who had been in the National Guard for 12 years, and he had bought 25,000 acres of mineral land and had started coal operations and had incurred considerable obligations in starting such operations, and after he had gone into the service the title to his property was contested and was taken away from him, which left him several thousand dollars in debt. He and his brother, who is an Army officer, are applying every dollar they can spare from their salaries to this indebtedness on a percentage pro rata with his creditors. Some of those creditors filed complaints against him, and his resignation was asked for on that ground. His record as an officer, I understand, is splendid.

Gen. BIDDLE. If he is doing his duty as an officer, and if these debts standing over him do not affect his work as an officer, to my mind I think a mistake was made. I would also state that under

such circumstances when any individual case is brought to our attention we have it investigated. You can not, of course, establish any general rules about a matter of that sort, but whenever you see an injustice is done you can simply go after the man who does it.

The CHAIRMAN. The remedy in a case of that sort would be to appeal to the Secretary of War or to the Chief of Staff.

Gen. BIDDLE. There are a great many appeals, and we always consider them very carefully; in fact, the Secretary himself considers most of them personally.

Mr. FIELDS. Then if he should fail to offer his resignation under circumstances of that kind his commanding general would try him, would he?

Gen. BIDDLE. He might try him if he thought the case warranted it; yes; or he might bring him up before a board. That is within his authority.

Mr. McKENZIE. General, is not the situation just about this: If an officer happens to get into the Army and is involved in debt and is an honorable man and trying to act honorably, the Army will take care of him, but the Army refuses to stand as a receptacle for a man who undertakes to get in and make the Army a harbor in which to protect himself against his honest creditors?

Gen. BIDDLE. That is what I was trying to state to Mr. Fields.

Mr. FIELDS. That is absolutely correct, and the Army should distinguish between a man of that kind and a man who is called into the service from his business and is involved in debt.

Gen. BIDDLE. Yes, sir; that is the distinction I have been trying to make.

Mr. ANTHONY. General, is it the policy of the War Department now to permit National Guard organizations to serve in the units of their respective States?

Gen. BIDDLE. As far as possible, yes, sir.

Mr. ANTHONY. What is the reason for the consolidation of some of the National Guard regiments; that is, where you put regiments from one State in with regiments from another State, which to me appears to be openly in violation of a provision of law which, I think, was secured by Mr. McKenzie, of Illinois, the intent of which was to permit the National Guard units to serve as such throughout the war?

Gen. BIDDLE. Of course, the National Guard units from a single State were not big enough to fill a division, which means 27,000 men. There were only two or three States who had enough National Guard for that.

Mr. ANTHONY. What I have in mind is where you took a regiment from one State and consolidated it with a regiment from another State.

Gen. BIDDLE. That was simply to absorb the National Guard in these divisions.

Mr. ANTHONY. Was not that in violation of the intention of that provision of law?

Gen. BIDDLE. I do not think so. Otherwise, you would have no place to put them. They would have to be either consolidated or discharged, because only a certain number of divisions were needed, and each division has a certain organization.

Mr. ANTHONY. Is not the matter of your divisions a flexible one?

Gen. BIDDLE. No, sir; not the number of regiments or brigades.

Mr. ANTHONY. But the size of a division, as to the number of men, is flexible?

Gen. BIDDLE. No, sir.

Mr. ANTHONY. Is it fixed now?

Gen. BIDDLE. Yes, sir.

Mr. ANTHONY. What is the number?

Gen. BIDDLE. About 27,000 or 28,000.

Mr. ANTHONY. The Adjutant General spoke to us yesterday of a division of 12,000 men.

Gen. BIDDLE. I do not think that was one of our divisions.

Mr. ANTHONY. It was in Porto Rico, I believe.

Gen. BIDDLE. There may have been a special division there, or a Philippine division, of that size.

Mr. ANTHONY. What is the size of a French division now?

Gen. BIDDLE. It has been reduced lately. It is between 15,000 and 20,000 men.

Mr. ANTHONY. As a matter of fact, are not the sizes of divisions constantly being changed in the Army in an effort to keep in touch—

Gen. BIDDLE (interposing). No, sir; the changing of the size of a division abroad is largely due to a lack of men. Our organization is based on the best opinion of the military authorities abroad as well as our own, and we feel we ought to start out with that number, and one of Gen. Pershing's most urgent requests is always to keep the divisions full.

Mr. ANTHONY. I can not see quite the argument that you advance as to why you should have to take a regiment from one State and consolidate it with a regiment from another State in order to keep a division full. Why could you not simply take a certain number of company units from another State and attach it so as to complete your division, if that is necessary?

Gen. BIDDLE. Because we had more distinct regiments than we had places for them in these different organizations.

Mr. ANTHONY. Were you forced to change your regimental organizations in your National Army units the same way in order to make up your divisions?

Gen. BIDDLE. There were no units of the National Army. That was started anew.

Mr. ANTHONY. I may be very dense on military subjects, but I never could quite see the logic of that argument.

Gen. BIDDLE. Mr. Anthony, suppose we had from the States 50 regiments. Suppose in our organization we only had room for 25 regiment; you either have to discharge 25 of those regiments or you would have to consolidate them with the others.

Mr. ANTHONY. Why could you not make an additional division?

Gen. BIDDLE. Because we had all the divisions of the National Guard we needed, and we did not have the men to fill them. Another reason was that none of these regiments was full.

Mr. ANTHONY. Why could not the regiments have been filled up? It has been announced as your purpose to use your drafted men for the purpose of filling up regiments in the National Guard or Na-

tional Army. Why were not those regiments filled up to their capacity and organized properly into your divisions?

Gen. BIDDLE. To begin with, of course, we took the National Guard in as a unit, and they were not filled at the time. Then we had all these regiments of National Guard and we had a certain number of divisions to put them in and a certain number of regiments in those divisions, and so it seemed to us by all odds the best thing to consolidate and put them in together. That is the only answer I can give. We made an effort to keep the older organizations intact as much as we could. Of course, we did not always succeed in that, but we made an effort to do it.

Mr. GORDON. General, Gen. Sharpe testified before our committee that he formally notified you long before these last drafts were made, in November and December, I believe it was, that he would not have sufficient clothing and blankets for these men until the 31st of December, and that you replied in substance that you would call them out any way.

The CHAIRMAN. Gen. Biddle was not the Chief of Staff. It was Gen. Scott.

Mr. GORDON. He said the Chief of Staff. When were you appointed Chief of Staff?

Gen. BIDDLE. I have been acting since the 1st of November.

Mr. GORDON. I was using the term "Chief of Staff" impersonally.

Gen. BIDDLE. Yes.

Mr. GORDON (continuing). That the reply of the Chief of Staff was that they would call them out any way because of the psychological effect on the enemy of the failure to call out these units. Did that come within the purview of your official duties since you have been Chief of Staff?

Gen. BIDDLE. Not any further than what I mentioned a few minutes ago. There were still about 180,000 of the first draft to come in when I arrived here the 1st of November, and then it was put up to me that the equipment was lacking, and as winter was coming on we stopped at once bringing in more men, and they have not come in yet.

Mr. GORDON. Then since you have been Chief of Staff you have not called in any units after you were advised they had not sufficient blankets and clothing to equip them?

Gen. BIDDLE. That is practically so. We called in a few special units, a few engineers and others, but that is practically so. But I want to state, in justice to the others, that when I came here winter was here and the actual situation was much better known than it was in the summer, when doubtless that remark was made; so that I might very well have made that remark at that time, or Gen. Scott or whoever it was would have taken the action I did when I took it.

Mr. GORDON. Is it your judgment that we ought to call men by the draft into the military service when we are not prepared to clothe and equip them because of any psychological effect on the enemy?

Gen. BIDDLE. I have already answered that. I think that was the judgment of everybody here at the time. I do know we shall not do it in the future because we do not have to do it in the future.

Mr. ANTHONY. General, when we first began to increase our military forces, it was the policy of the War Department to resort en-

tirely to the draft to raise the Army; and is it not true that subsequent to that determination the department began largely to recruit the Regular Army and the National Guard by the volunteer method, so that you got all the men you were prepared to take care of by the volunteer method, or all you should have had at that time, and that when you resorted to the draft you were unable to properly clothe and take care of them; is that correct?

Gen. BIDDLE. I do not think so, to the extent that we could have taken care of very many more than came in through the volunteer method.

Mr. ANTHONY. But you could not take care of all you finally did get by the draft?

Gen. BIDDLE. No, sir; there was a shortage of clothing and equipment. The shortage in clothing is practically made up now, but the equipment not yet.

Mr. ANTHONY. In other words, there were so many more volunteers than had been anticipated that it perhaps exhausted the supply?

Gen. BIDDLE. Well, I do not know how many volunteers did come in, but of course we were able to take care of them and many more.

Mr. ANTHONY. Have you the figures to show how many volunteers came into the Regular Army and the National Guard?

Gen. BIDDLE. The Adjutant General would have them. I know they came in little by little until very near the end of the time when volunteering was stopped, and then for the last week or two they came in very rapidly. Up to that time they had not come in very rapidly.

The CHAIRMAN. On January 31 of this year Gen. McCain testified there were in the Regular Army and National Guard about 924,000 men.

Mr. CRAGO. Fifty-one thousand of them were drafted men.

Mr. McKENZIE. General, do you believe that the passage of the conscription law had any tendency to deter young men from enlisting in the Army?

Gen. BIDDLE. It is just a question of individual judgment which I do not think anybody could answer. I do not see why it should have, from the fact that so many enlisted just before the enlistment was stopped.

Mr. McKENZIE. Then, just reversing the question, do you believe that the passage of the conscription law had any influence on bringing men into the volunteer service?

Gen. BIDDLE. Not to any great extent; no. There were some toward the end who came in simply because they felt they would have more choice of location, but those psychological questions are rather beyond my ken.

Mr. HULL. General, I would like to ask you a question, going back to the questions of Mr. Anthony in regard to the destruction of the National Guard. I have in my own district a Cavalry unit which was formed to reorganize the National Guard of Iowa, but before that was completed it was called off. They had four troops. The four troops were taken to the border and given the proper training down there. Largely the men who went into that service went in because they were farm boys who loved horses, and they made ideal cavalrymen. After they came back from the border they were called out.

and they were kept as a Cavalry troop, I think, up to about October or November. Then orders came that they should be made over into a machine-gun company. This was done. Now, I understand, they are forming Cavalry regiments, but these boys are in a machine-gun company. Now, do you think that is good military policy?

Gen. BIDDLE. If there were Cavalry in those divisions, of course, that would not be the policy, but there are no Cavalry in those divisions.

Mr. HULL. But you are forming Cavalry regiments?

Gen. BIDDLE. Not in the divisions; no, sir. We are forming some corps Cavalry and are taking men who have had experience as cavalrymen as much as we can. Of course, there is a Cavalry division which is being formed; but it is questionable whether it will go over to France for some time, as they are not using very much Cavalry over there at present. The only answer I can give you is that when they formed this division there was no Cavalry, and therefore the cavalrymen were put in units where it was thought they would fit best. They were put into the Artillery largely on account of their knowledge of horses, etc., and they were put into machine-gun companies because those were separate units where the four troops of which you speak could keep their own identity, rather than be amalgamated into an Infantry regiment where they would have lost their identity. Of course, you understand I am talking generally, because I do not remember this particular case, but that is the policy we tried to follow when there were relatively a small number of men such as you speak of. We tried to put them in some organization where they could keep their own identity as far as possible.

Mr. HULL. Now that they are forming Cavalry, would it not be a good plan to pick those men up who are already trained as cavalrymen? They have had no machine-gun experience; at least, they have had no machine guns.

Gen. BIDDLE. As a general proposition, those men would make the best men. What has been the special action in this case, I am sorry to say, I do not know; but I do know, of course, that we are trying to get men of experience for these Cavalry regiments.

Mr. HULL. There is another question I would like to ask. The First National Guard Regiment of Iowa is down on the border, and is short of men. They want, of course, to secure men from Iowa, and men from Iowa, of course, would prefer to go there. Is there any objection or is there any reason why when you draft men, after you have inducted them into the service, you should not send them to this regiment without giving them three or four months in a cantonment, if the officers of the regiment would prefer it?

Gen. BIDDLE. There is no reason, except the regiment might be going abroad promptly or something of that sort.

Mr. HULL. The regiment is not going abroad shortly.

Gen. BIDDLE. I mean we might want to get men who have had several months' training before we send them to the regiments; but, as a general proposition, of course, we would like to keep men who know each other and who are from the same part of the country together.

Mr. HULL. Did your department have anything to do with the selection of Camp Cody as a camp?

Gen. BIDDLE. The camps were selected largely on the advice and opinion of the department commanders. I do not remember especially about Camp Cody, but I rather take it for granted that, along with the other ones, the department commander of that department recommended Cody.

Mr. HULL. Have you had any complaints about that selection or would they come to you?

Gen. BIDDLE. They would come to me. Not especially; no, sir; not enough to make me feel there was a mistake made.

Mr. HULL. There seems to be a very general complaint about the selection of Camp Cody. I myself do not know why it should have been selected, because it is way out West and is in a very high altitude, and it has one very disagreeable condition, and that is the sand storms which prevail there practically every week, and make it almost impossible to practice or do anything else.

The CHAIRMAN. General, the next item is "Expenses of military observers abroad." What is the necessity for this item?

Gen. BIDDLE. We are sending officers abroad for special observation constantly. For instance, as you know, Gen. Crozier has just gone abroad for observation work, and we sent all the division commanders abroad to educate them so they could better train their divisions.

The CHAIRMAN. Then this item is necessary to pay such expenses?

Gen. BIDDLE. Yes, sir. It is independent of the military attachés and the men of the Military Intelligence Office.

The CHAIRMAN. And independent of the men operating with Gen. Pershing's Army?

Gen. BIDDLE. Yes, sir.

The CHAIRMAN. Mr. Gordon wants to know why there should be any extra expense, inasmuch as the officers get pay and allowances.

Gen. BIDDLE. This is for mileage, automobile hire, and many other things—perhaps guides or whatever might be necessary. Of course, they would not be paid their pay and allowances out of this fund.

Mr. GORDON. They would not?

Gen. BIDDLE. They would not get the regular pay and allowances of an Army officer from this appropriation.

Mr. GORDON. They are all Army officers?

Gen. BIDDLE. Yes, sir.

Mr. GORDON. If they get their regular pay and travel allowances—

Gen. BIDDLE (interposing). Their traveling allowances would come out of this. I thought you meant their pay.

Mr. GORDON. In detailing an Army officer and sending him on a trip, he gets his pay and traveling expenses under the law, even if he is sent to Europe.

Gen. BIDDLE. Yes, sir; and they are paid out of this fund.

Mr. GORDON. What part of their pay and allowances comes out of this fund?

Gen. BIDDLE. All except their ordinary pay and what they would get at any station.

Mr. GORDON. What are they entitled to in addition to their ordinary pay and allowances?

Gen. BIDDLE. They are entitled to the expenses of their journey.

Mr. GORDON. Do they get mileage, too?

Gen. BIDDLE. I do not believe we have in mind the same meaning of the word "allowance." When I say "pay and allowances," I have in mind the ordinary allowances of a man at the post. What I think you have in mind is the allowance for travel.

Mr. GORDON. Yes.

Gen. BIDDLE. They get mileage or expenses according to the conditions which the law calls for. I mean in certain cases they get mileage and in other cases they get expenses.

Mr. GORDON. In what cases do they get mileage?

Gen. BIDDLE. Well, for instance, suppose I went abroad from here. I would get mileage from here to New York, because that is the rule, and I would get expenses on the ship. When I get on the other side I would get expenses or mileage according to the way I made the journey. If I went on the railroad train I would be given mileage, but if I had to hire transportation I would probably just get expenses. That is all covered by law and regulation.

Mr. SHALLENBERGER. Is mileage and all expenses paid out of this fund, or is mileage taken out of the mileage fund?

Gen. BIDDLE. All expenses are paid out of this fund.

The CHAIRMAN. As I understand, the mileage allowance applies only to travel in this country?

Gen. BIDDLE. I would not be quite sure of that.

The CHAIRMAN. In this country or its possessions?

Gen. BIDDLE. It applies to a certain extent in France. It makes very little difference to the Army officer; it amounts to the same thing.

Mr. ANTHONY. Would these observations be confined to our own Army abroad, or to the foreign armies?

Gen. BIDDLE. Foreign armies.

Mr. ANTHONY. I understand it is your policy to send the general officer in command of a department or division for certain service abroad for observation. Would that come out of this appropriation?

Gen. BIDDLE. Yes, sir. We call them observers.

Mr. ANTHONY. But it is really not observing in the way that we have been accustomed to use that word?

Gen. BIDDLE. It is observing largely for his own education. I will add that all of these officers, when they come back, report here, and they are required to give information from what they have learned over there. For instance, if a military mission went abroad they would be considered as observers.

Mr. SHALLENBERGER. If I understand, there is no possibility of double pay for travel or expense allowance, and if an officer is paid out of this fund he is not paid out of the other fund?

Gen. BIDDLE. It is absolutely impossible to secure double pay in any way.

The CHAIRMAN. How do you estimate that item, \$100,000?

Gen. BIDDLE. It is more or less a guess. We had that amount last year, and they fairly well spent it.

The CHAIRMAN. How much have they spent up to date?

Gen. BIDDLE. I do not know exactly how much.

The CHAIRMAN. Will you spend it all by the time?

Gen. BIDDLE. We will not spend any more because of the fact of its being there. We have certain policies that we are trying to carry out; that is all.

The CHAIRMAN. The next item is "United States Service Schools"?

Gen. BIDDLE. There is somewhat of an increase in that item due to the fact that we are enlarging the school of musketry and the school of artillery at Fort Sill. The regular schools as they have been run during peace times have largely been given up, but we are making use of the facilities of the schools for instructing new officers.

The CHAIRMAN. Please put in the record a statement showing where that increase comes.

Gen. BIDDLE. There is one in the estimates. I have here a very full statement. I think it is rather unnecessarily full as to each and every item.

The CHAIRMAN. Substantially as in the estimate?

Gen. BIDDLE. Yes, sir; except a little more detail.

United States service schools.

Employees.	Rate.	Estimated, 1919.	Estimated, 1918.
		<i>Number.</i>	<i>Number.</i>
Salaries: Translators.....per annum..	\$1,200. 00	2	1
Wages:			
Carpenter.....per diem..	3. 00	1	1
Laborers, emergency employment.....do.....	2. 00	3	3
Salaries.....		\$2,400. 00	\$1,200. 00
Wages.....		2,000. 00	1,750. 00
OTHER OBJECTS OF EXPENDITURE.			
Equipment, material, machinery, and repairs.....		37,050. 00	16,000. 00
Stationery, furniture, printing.....		37,390. 00	12,850. 00
Photographic and laboratory supplies.....		3,400. 00	3,000. 00
Telegraph and telephone.....		200. 00	200. 00
Transportation.....		50. 00	50. 00
Increase of compensation for translators.....		120. 00	.....
Miscellaneous.....		200. 00	300. 00
Urgent deficiency appropriation not classified, 1918.....		.....	25,325. 00
Total.....		82,810. 00	60,675. 00

The CHAIRMAN. The next item is on page 16, "Pay of clerks, messengers, and laborers, office of the Chief of Staff." You are asking for an increase of 19 clerks?

Gen. BIDDLE. That is simply due to the increase of the Army and the large amount of extra work which comes in consequence. This applies both to the office at the War Department and the office at the War College. The amount of pay is based largely on the proportion usually observed and also on the class of men that we think we should have.

Mr. GORDON. To what extent do you utilize commissioned officers in your office?

Gen. BIDDLE. What do you mean?

Mr. GORDON. How many men do you have in your office who are holding commissions in the Army, doing any kind of work, clerical or otherwise?

Gen. BIDDLE. We have, as far as I know, none doing strictly clerical work. It is our effort to avoid that. The number of officers of the

General Staff at the War Department, in my office, is 22, and at the War College 24.

Mr. GORDON. Is it your policy to utilize civilian service in all cases where it may properly be done?

Gen. BIDDLE. Yes, sir.

Mr. GORDON. The 22 commissioned officers that you have are necessary for the performance of the duties?

Gen. BIDDLE. It is necessary for them to be officers. We have tried hard to limit the number of officers, especially lately, and have been very particular, having a special regard to men within the draft age. We have not taken anybody within the draft age, except where their qualifications were such that you could not get another suitable man outside of the draft age. There are a great many new industries, like automobile, munitions, and others, which are new, and therefore the young men are the only one who know them. We have therefore had to commission a good many men within the draft age. We limit it as much as we can.

Mr. SHALLENBERGER. You have not yet the number of officers that you are entitled to under the law?

Gen. BIDDLE. No, sir.

The CHAIRMAN. How many officers have you in the General Staff?

Gen. BIDDLE. In the permanent General Staff we have now 80, with 8 vacancies. We are allowed 88, outside of the general officers; but in addition to that all the departments have General Staff officers, and all the divisions and corps and armies. They are not all appointed yet, because we have not formed any corps and we have not formed any army.

The CHAIRMAN. That explains the difference. Gen. Sharpe testified that there were 348 in the General Staff, and Gen. McCain told us the other day that there were 80. I suppose the difference is due to the staff officers with the Army.

Gen. BIDDLE. At the division, corps, and army headquarters. In France, where they have now about 20 on the permanent General Staff, we expect that Gen. Pershing will increase that number to 40. In an army there are 18 General Staff officers, in the five corps 35, and in the 44 divisions 176. That brings the number up to this total number here. Of course, they have not all been appointed yet.

The CHAIRMAN. How many have been appointed?

Gen. BIDDLE. In round numbers, I should say about 275. We have had to increase the number, or will increase it, because Gen. Pershing has recommended an additional General Staff officer for each division.

Mr. SHALLENBERGER. The 88 General Staff officers are actually in service with you in the city of Washington?

Gen. BIDDLE. No, sir; not entirely. There are 22 at the War Department and 34 at the War College. There are about 20 over with Gen. Pershing, and Gen. Bliss took over about 5 with him. We still have some vacancies.

Mr. SHALLENBERGER. Two hundred and seventy-five are to be appointed?

Gen. BIDDLE. They are all appointed to be with the divisions. Each division has three or four, and each department headquarters has a certain number.

Mr. SHALLENBERGER. Did you say 20 more?

Gen. BIDDLE. There will be a certain number of additional staff officers permanently assigned. Others are simply detailed to the division or other unit. If they leave the division, they probably go back to other work. If we reduced the number of divisions, the number of General Staff officers would be reduced.

The CHAIRMAN. Did I understand you to say that the 275 you have now include those on duty here in your office and at the War College?

Gen. BIDDLE. Yes, sir; it includes all of those on this duty as well as all of those on duty with the organization.

Mr. QUIN. When you say "War Department," what do you mean by that to comprehend?

Gen. BIDDLE. The office of the Chief of Staff.

Mr. GREENE. There is a differentiation between the officers of the General Staff who are provided by law of the permanent Army and such temporary officers as you are now calling in. Do you contemplate that these temporary officers will remain actually permanent?

Gen. BIDDLE. If we reduce the number of divisions, they drop out automatically and as we increase them they increase automatically.

Mr. GREENE. Are these extra men appointed from the outside as reservists or are they taken from the Regular Army?

Gen. BIDDLE. From the Regular Army.

Mr. GREENE. They are detailed to the General Staff rather than holding a commission in that arm of the service?

Gen. BIDDLE. Yes, sir. An officer in any branch of the service may be detailed to the General Staff and assigned to duty with one of the divisions.

Mr. GREENE. It is a detail and not a tenure?

Gen. BIDDLE. Yes, sir.

Mr. MORIN. Does the law require that the boards which pass on the National Guard officers shall be composed of a majority of officers of the National Guard?

Gen. BIDDLE. It is not a law, but an order issued from our office.

Mr. MORIN. When was that?

Gen. BIDDLE. About the middle of November.

Mr. MORIN. Did that go into effect at once?

Gen. BIDDLE. As far as I know. I explained that before. This is the situation. We felt that we wanted the National Guard to be considered by their own people. Of course, in the National Guard divisions there are only about a dozen Regular officers against several hundred National Guard officers and the chances were that there would always be a majority on any board, but in order that there could be no question the division commanders were instructed to see that there was a majority of National Guard officers on these boards, except in cases where it was impracticable, and then in those cases to specially notify us and that we would take it up.

Mr. MORIN. Do you know whether that was so of the board which passed on these officers of the Pennsylvania regiments at Camp Hancock a few weeks ago, and was their case passed on previously or since?

Gen. BIDDLE. I think since, but there have been very few Regular officers with the Pennsylvania National Guard, and it would have been very hard to find a board which was not composed of a majority of National Guard officers.

Mr. MORIN. The board that passed on these Pennsylvania regiments, was that composed of National Guard officers or Regular Army officers?

Gen. BIDDLE. I feel sure that there was a majority of National Guard officers on that board.

Mr. MORIN. Please put that in the record.

Gen. BIDDLE. Yes, sir.

ADDITIONAL STATEMENT WITH REFERENCE TO THE COMPOSITION OF BOARDS WHICH
ELIMINATED NATIONAL GUARD OFFICERS FROM THE TWENTY-EIGHTH DIVISION
(PENNSYLVANIA).

A careful examination of the records in the Militia Bureau shows that in the elimination of all officers from the Pennsylvania National Guard division this elimination was the result of action in every case of boards of officers, the majority membership of which was National Guard officers.

Mr. HARRISON. I tried to find the law that requires a majority of the board to be National Guard officers, but I could not do it.

Gen. BIDDLE. There is no law. It is an instruction from these headquarters.

Mr. HARRISON. I have two cases right in my district. One of the officers who was a National Guard officer was displaced, but the Secretary of War set aside the finding of the board. When I went to look up the law, I could not find it.

Gen. BIDDLE. It would not be in the law. I do not think it is a proper thing to put in the law. We follow up individual cases. In every case that suggests there was any injustice done we have had it carefully investigated.

Mr. HARRISON. In this case an officer was a colonel in the National Guard for 15 years, I think.

Gen. BIDDLE. What organization was that?

Mr. HARRISON. A Virginia organization.

Gen. BIDDLE. Are you sure that it was not physical?

Mr. HARRISON. His case was not; the case of the lieutenant was physical. I had him examined by the doctors at the University of Virginia, and they pronounced him absolutely physically fit. On that representation he was given another examination. That produced a certain amount of demoralization in the National Guard.

Gen. BIDDLE. To my mind, the answer has always been that the Guard acts on its own members and a National Guard officer is put in the vacancy.

Mr. HARRISON. In this case they did not put a National Guard officer in the man's place, and that produced a certain amount of demoralization in the Virginia National Guard.

Gen. BIDDLE. I remember the case of Virginia being brought up. All I can say is that we try to apply the strict rule, and apply it impartially.

Mr. HARRISON. I understand. I have no complaint. I was wondering whether that policy was being strictly followed.

Gen. BIDDLE. As far as I know. Gen. Carter has charge of it, and his assistant looks over all cases. He has orders to report any violation to me. Of course, there are some cases where it is not practicable, for some reason or other, but those cases are always investigated specially.

Mr. LUNN. In connection with the accident on yesterday this statement appears in the press:

A pathetic feature is that, although all the victims wore tags, no identification numbers had been put on them because these Americans had not as yet been assigned to definite Army units. Therefore, there is no way to identify them, and they will be buried in one grave.

If that is true—of course, we do not know—would not there be some officer tremendously at fault?

Gen. BIDDLE. I do not believe that is true, but, of course, I could not state absolutely.

Mr. LUNN. If it is true, some officer has failed in a way that would deserve very severe punishment?

Gen. BIDDLE. Yes, sir; if those men were not properly marked so that they could be identified.

Mr. MORIN. Did I understand you to say, General, that in all cases where these National Guard officers were removed, that National Guard officers were put in their places?

Gen. BIDDLE. As far as I know; yes, sir.

Mr. MORIN. As high as colonels?

Gen. BIDDLE. Yes, sir.

Mr. MORIN. I have in mind a case—the One hundred and eleventh Pennsylvania Regiment—where I understand a Regular officer was put in his place.

Gen. BIDDLE. There are certain instances in the case of technical regiments——

Mr. MORIN (interposing). Just an Infantry regiment.

Gen. BIDDLE. I doubt it, unless they have asked for it or there was some special reason. We do have constant requests for Regular officers, but we almost always turn them down.

Mr. MORIN. He was from some State, perhaps out West. If that is the case, do you not think it would be better to put in somebody from Pennsylvania?

Gen. BIDDLE. No, sir.

Mr. MORIN. If you could get the right man, because there is a certain feeling among the people of that State that it ought to be a man from Pennsylvania in charge of the Pennsylvania troops, if it is possible to get the proper man?

Gen. BIDDLE. There is something to be said on that side. We leave it so much to the division commander that we do not go into his assignments unless there is complaint.

Mr. MORIN. That is one State organization, and there is a feeling that the men volunteered and that they should be commanded by officers from that State if you can get the men.

Gen. BIDDLE. In the course of time, when officers from the training camps are brought into regiments, there is bound to be more or less mix up of States; and if, for example, the division should meet with great loss, it would be filled up from the nearest division. There will have to be changes.

Mr. ANTHONY. Is it the purpose of the General Staff to formulate military plans for the Army of the United States and for probable campaigns?

Gen. BIDDLE. Yes, sir.

Mr. ANTHONY. Preliminary to the 1st day of last April, did the General Staff ever formulate a plan of campaign for the American Army in Europe?

Gen. BIDDLE. I do not know about the date; I was not here; but I do know that the whole question of the best use of the American Army when we entered into the war was very thoroughly studied by the General Staff.

Mr. ANTHONY. Preliminary to the 1st day of last April, had plans for the transportation of an army of 500,000 or 1,000,000 men ever been perfected to carry such an army to Europe?

Gen. BIDDLE. We have made on various occasions during the last three of four years many plans for transporting the Army to Europe. Of course that exact question as to whether at that particular time I am unable to answer, because I was not here at the time, but I do know that plans have been made as to what we should do with our Army, and there have been various plans as to how many transports we would need and all that to carry the Army to Europe or elsewhere.

Mr. ANTHONY. Has the General Staff ever outlined how many men it would be practicable for this country to transport to Europe?

Gen. BIDDLE. Yes, sir; I believe so. I do not know whether it was worked out with the boats we have now available.

Mr. ANTHONY. Do you remember how many men the General Staff recommended it was possible to transport?

Gen. BIDDLE. No; I never heard any such figures.

Mr. ANTHONY. I was wondering if you had.

Gen. BIDDLE. No, sir. It has been a constant source of study at the War College.

Mr. ANTHONY. Previous to the European war did the General Staff ever contemplate the idea of the American Army operating in Europe?

Gen. BIDDLE. It contemplated it as a possibility, but not in my time as a probability. When the war began I was not with the War College. They may have taken that question up more fully later.

FEBRUARY 8, 1918.

OFFICE OF THE CHIEF OF COAST ARTILLERY.

STATEMENT OF BRIG. GEN. JOHN D. BARRETTE, ACTING CHIEF.

The CHAIRMAN. In the item on page 5, "Coast Artillery School, Fort Monroe, Virginia," you are asking for a less amount than the appropriation of last year?

Gen. BARRETTE. Yes, sir. We are asking for the routine amount of \$28,000. We got \$32,000 last year, because there was \$4,000 extra asked for relief maps for instruction. We have gone back to

the routine amount. We have not been able to make an estimate that would be a valuable one for the increased work that we can foresee. The school for enlisted specialists is going to multiply its output about forty times. In addition to a large expansion in the number of electrician sergeants, sergeants major, master gunners, and radio sergeants, we are going to train chauffeurs for tractors, trucks, and automobiles. It is expected that the number of officers passing through the school also will be multiplied about forty times. Of course, the expense will not increase at all in proportion, but there will be a certain amount of expense that we can not foresee, and we will probably have to come back for that expense.

Mr. ANTHONY. What is the idea of training the chauffeurs at Fortress Monroe?

Gen. BARRETTE. For the motorized regiments of heavy artillery which are going to France.

Mr. ANTHONY. For artillery purposes only?

Gen. BARRETTE. Yes, sir. The Quartermaster Department has at Jacksonville a school; and the idea at first was to train our chauffeurs there, but that school did not have the capacity, and so lately it has been decided that they would prefer us to train our own.

Mr. ANTHONY. It is the plan to transport practically all of the heavy artillery in France by motor?

Gen. BARRETTE. That which the Coast Artillery will have will be motor drawn or on railway mounts.

Mr. ANTHONY. What will be the size of the guns that the Coast Artillery will handle in France?

Gen. BARRETTE. Six, eight, ten, twelve, and fourteen inch guns and twelve-inch mortars and sixteen-inch howitzers.

The CHAIRMAN. When will you know how much you will need?

Gen. BARRETTE. As soon as we get the instruction under way, of these chauffeurs. I can give you now an approximate estimate.

The CHAIRMAN. We should be glad to have it now. If we want more definite information, we can get it later.

Gen. BARRETTE. I can say for the enlisted-specialists' school, for which we usually ask \$7,000 (this year \$10,000), we will probably want \$25,000 for this increased work; and for the officers' school, for which we usually ask \$8,500, we will probably want \$25,000.

The CHAIRMAN. You will practically want \$30,000 additional?

Gen. BARRETTE. \$50,000 additional.

The CHAIRMAN. You said that you had asked for \$10,000 in one item and wanted \$25,000. Did you mean \$25,000 additional?

Gen. BARRETTE. Yes, sir; \$25,000 additional.

The CHAIRMAN. That would be practically \$50,000 additional?

Gen. BARRETTE. Yes, sir; that is as near as we can make the estimate now.

The CHAIRMAN. Have you an itemized statement of each one of the subdivisions under this item?

Gen. BARRETTE. Yes, sir; I have a complete statement fully itemized.

The CHAIRMAN. Please put it in the record.

Gen. BARRETTE. Yes, sir.

(The statement referred to follows:)

Object of expenditures.	Estimated, 1919.	Expended, 1917.
Incidentals:		
Chemicals.....	\$50. 00	\$48. 77
Stationery.....	3,000. 00	3,097. 17
Printing.....	1,350. 00	780. 00
Binding.....	250. 00	24. 09
Hardware.....	150. 00	227. 45
Materials.....	2,000. 00	1,567. 23
Cost of special instruction of officers detailed as instructors.....	600. 00	500. 00
Employment of temporary, technical, or special services.....	250. 00	35. 40
Extra-duty pay—		
1 carpenter (civilian), at \$1,000 per annum.....	1,000. 00	435. 47
1 overseer (soldier), at \$0.35 per diem.....	100. 00	86. 00
Office furniture and fixtures.....	1,500. 00	1,511. 18
Machinery.....	250. 00	513. 52
Unforeseen expenses.....	1,500. 00	845. 69
Total under this heading.....	12,000. 00	9,671. 92
Division of enlisted specialists:		
Engines.....	500. 00	.....
Generators.....	250. 00	55. 32
Motors.....	250. 00	352. 02
Machines.....	300. 00	355. 20
Measuring instruments.....	1,200. 00	266. 25
Special apparatus.....	2,500. 00	2,674. 72
Materials.....	5,000. 00	3,374. 30
Total under this heading.....	10,000. 00	7,077. 81
Department of artillery and land defense:		
Special apparatus.....	250. 00	1,325. 43
Materials.....	750. 00	1,179. 65
Experimental purposes.....	500. 00	518. 31
Total under this heading.....	1,500. 00	3,023. 39
Department of engineering and mine defense:		
Engines.....	250. 00	65. 17
Generators.....	100. 00	.....
Motors.....	100. 00	53. 86
Machines.....	150. 00	571. 78
Measuring instruments.....	500. 00	49. 12
Special apparatus.....	300. 00	3,275. 58
Materials.....	600. 00	1,695. 20
Total under this heading.....	2,000. 00	5,710. 81
Library:		
Purchase of books and periodicals.....	2,400. 00	2,361. 97
Binding of same.....	100. 00	154. 10
Total under this heading.....	2,500. 00	2,516. 07
Total.....	28,000. 00	28,000. 00

Thereupon the committee adjourned to meet on Monday, February 11, 1918, at 10.30 o'clock a. m.)

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